TITLE 20 ENVIRONMENTAL PROTECTION
CHAPTER 6 WATER QUALITY
PART 6 GROUND WATER PROTECTION - SUPPLEMENTAL PERMITTING REQUIREMENTS FOR DAIRY FACILITIES

20.6.6.1 ISSUING AGENCY: Water Quality Control Commission.
[20.6.6.1 NMAC - N, xx/xx/2010]

20.6.6.2 SCOPE: All persons subject to the Water Quality Act, NMSA 1978, Sections 74-6-1 et seq and specifically to dairy facilities and their operations.
[20.6.6.2 NMAC - N, xx/xx/2010]

20.6.6.3 STATUTORY AUTHORITY: Standards and Regulations are adopted by the commission under the authority of the Water Quality Act, NMSA 1978, Sections 74-6-1 through 74-6-17.
[20.6.6.3 NMAC - N, xx/xx/2010]

20.6.6.4 DURATION: Permanent.
[20.6.6.4 NMAC - N, xx/xx/2010]

20.6.6.5 EFFECTIVE DATE: xx/xx/2010, unless a later date is cited at the end of a section.
[20.6.6.5 NMAC - N, xx/xx/2010]

20.6.6.6 OBJECTIVE: The purpose of 20.6.6 NMAC is to supplement the general permitting requirements of 20.6.2.3000 through 20.6.2.3114 NMAC to control discharges specific to dairy facilities and their operations.
[20.6.6.6 NMAC - N, xx/xx/2010]

20.6.6.7 DEFINITIONS:

A. Terms defined in the Water Quality Act and 20.6.2.7 NMAC shall have the meanings as given in such.

B. As used in 20.6.6 NMAC, a term defined in this part shall have the following meaning.

(1) "Adjacent" means lying near, but lacking actual contact along a boundary or at a point.

(2) "Applicant" means the person applying for a new, renewed or modified discharge permit.

(3) "Construction quality assurance" or "CQA" means a planned system of activities necessary to ensure that standards and procedures are adhered to and that construction and installation meet design criteria, plans and specifications. A CQA includes inspections, verifications, audits, evaluations of material and workmanship necessary to determine and document the quality of the constructed impoundment or structure, and corrective actions when necessary.

(4) "Construction quality control" or "CQC" means a planned system of operational techniques and activities used to preserve the quality of materials and ensure construction to specifications. Elements of a CQC include inspections, testing, data collection, data analysis and appropriate corrective actions.

(5) "Contiguous" means being in actual contact along a boundary or at a point.

(6) "CQA/CQC Report" means a report that summarizes all inspection, testing, data collection, data analysis and any corrective actions completed as part of CQA or CQC for a project.

(7) "Dairy facility" means the entire dairy site, including the production area and the land application area, where the discharge and associated activities will or do take place.

(8) "Dairy rule" means 20.6.6 NMAC, as amended.

(9) "Discharge volume" means the maximum daily volume in gallons per day of wastewater authorized for discharge by a discharge permit.

(10) "EPA" means the United States environmental protection agency.

(11) "Existing dairy facility" means a dairy facility that is currently discharging, or has previously discharged and has not been issued a notice from the department verifying that closure and post-closure monitoring activities have been completed.

(12) "Existing impoundment" means an impoundment that is currently receiving or has ever received wastewater or collected stormwater and that has not been closed pursuant to a discharge permit.

(13) "Expiration" means the date upon which the term of a discharge permit ends.

(14) "Field" means a unit of irrigated cropland within the land application area cultivated in the same manner to grow a specific crop for the uptake and removal of nutrients.

(15) "Flow meter" means a device used to measure the volume of water, wastewater or stormwater that passes a particular reference section in a unit of time.

(16) "Freeboard" means the vertical distance between the elevation at the lowest point of the top inside edge of the impoundment or spillway and the elevation of the water level in the impoundment.

(17) "Impoundment" means any structure designed and used for storage or disposal by evaporation of wastewater, stormwater, or a combination of both wastewater and stormwater, or used for solids settling. A multiple-cell impoundment system having at least one shared berm or barrier whose smallest cells have a cumulative constructed capacity of 10 percent or less of the constructed capacity of the largest cell shall be considered a single impoundment for the purposes of the dairy rule.

(18) "Land application area" means irrigated and cultivated fields collectively authorized by a discharge permit to receive wastewater or stormwater applications as a source of nutrients managed for crop production.

(19) "Land application data sheet" means a form used to report all nitrogen inputs applied to each field within the land application area, including the cropping status of the field at the time of application (i.e., fallow, corn, wheat, etc.).

(20) "New dairy facility" means a dairy facility that has never before discharged wastewater.

(21) "Permittee" means a person who is issued or receives by transfer a discharge permit for a dairy facility or who makes or controls a discharge at a dairy facility.

(22) "Production area" means that part of the animal feeding operation that includes the following: the animal confinement areas; the manure, residual solids and compost storage areas; the raw materials storage areas; and the wastewater and stormwater containment areas. The animal confinement areas include but are not limited to open lots, housed lots, feedlots, confinement barns, stall barns, free stall barns, milkrooms, milk centers, cowyards, barnyards, hospital pens and barns, and animal walkways. The manure, residual solids and compost storage areas include, but are not limited to, storage sheds, stockpiles, static piles, and composting piles. The raw materials storage areas include, but are not limited, to feed silos, silage storage areas, feed storage barns, and liquid feed tanks. The wastewater and stormwater containment areas include, but are not limited to, settling separators, impoundments, sumps, runoff drainage channels, and areas within berms and diversions which prohibit uncontaminated stormwater from coming into contact with contaminants.

(23) "Spillway" means a structure used for controlled releases from an impoundment designed to receive stormwater, in a manner that protects the structural integrity of the impoundment.

(24) "Stormwater" means direct precipitation and runoff that comes into contact with water contaminants.

(25) "Unauthorized discharge" means a release of wastewater, stormwater or other substances containing water contaminants not approved by a discharge permit.

(26) "Wastewater" means water, except overflow from the drinking water system and stormwater, that has come into contact with water contaminants as a result of being directly or indirectly used in the operations of a dairy facility including, but not limited to, the following: washing, cleaning, or flushing barns or other roof-covered production areas; washing of animals; spray-cooling of animals (except in open lots); and cooling or cleaning of feed mills and equipment.

[20.6.6.7 NMAC - N, xx/xx/2010]

20.6.6.8 REQUIREMENTS FOR DISCHARGING FROM DAIRY FACILITIES:

A. No person shall discharge from a dairy facility without a discharge permit. A person intending to discharge from a dairy facility shall submit an application for a discharge permit pursuant to 20.6.6.10 NMAC and remit fees pursuant to 20.6.6.9 NMAC.

B. Permittees, owners of record of a dairy facility and holders of an expired permit are responsible for complying with the dairy rule.

~~**C.** 20.6.6 NMAC applies to a dairy facility.~~

D. Unless otherwise noted in 20.6.6 NMAC, the requirements of 20.6.2.3101 through 20.6.2.3114 NMAC apply to a dairy facility.

E. Complying with the requirements of 20.6.6 NMAC does not relieve a dairy facility's owner, operator or permittee from complying with the requirements of other applicable local, state and federal regulations or laws.

[20.6.6.8 NMAC - N, xx/xx/2010]

20.6.6.9 FEES: Notwithstanding the requirements of 20.6.2.3114 NMAC, an applicant or permittee shall pay fees to the department pursuant to this section.

A. An applicant for a discharge permit or a discharge permit renewal for a dairy facility shall remit with the application to the department a filing fee in the amount of one hundred dollars ($100) and one-half of the applicable permit fee from table 1 of 20.6.2.3114 NMAC. The filing fee and the permit fee payment remitted with the application are not refundable and may not be applied toward future discharge permit applications. If the department issues a discharge permit, the permittee shall remit a permit fee payment equal to one-tenth of the applicable permit fee from table 1 of 20.6.2.3114 NMAC on the first occurrence of August 1 after the effective date of the discharge permit, and annually thereafter until the expiration or termination of the discharge permit.

B. An applicant for a discharge permit modification separate from a discharge permit renewal shall remit a filing fee of one hundred dollars ($100) and a permit modification fee with the application. The permit modification fee shall be equal to one-half of the applicable permit fee from table 1 of 20.6.2.3114 NMAC. The filing fee and the permit modification fee payment remitted with the application are not refundable and may not be applied toward future discharge permit applications. Payment of the permit modification fee shall not relieve a permittee from remitting the permit fee payments required by Subsection A of this section. If the discharge permit modification is required by the secretary outside the context of an enforcement action, a permit modification fee is not required.

C. A permittee requesting temporary permission to discharge pursuant to Subsection B of 20.6.2.3106 NMAC shall pay the fee specified in 20.6.2.3114 NMAC.

[20.6.6.9 NMAC - N, xx/xx/2010]

20.6.6.10 GENERAL APPLICATION REQUIREMENTS FOR ALL DAIRY FACILITIES:

A. Notwithstanding Subsection F of 20.6.2.3106 NMAC, a permittee shall submit an application for renewal of a discharge permit for a dairy facility to the department at least one year before the discharge permit expiration date. Notwithstanding Paragraph (11) of Subsection A of 20.6.2.3107 NMAC, a permittee with a discharge permit that will expire while a dairy facility is in the process of completing permanent closure measures or post-closure monitoring shall submit a renewal application for closure to the department at least one year before the discharge permit expiration date.

B. For a dairy facility that has not been constructed or operated, a permittee shall submit an application for renewal pursuant to Subsection A of this section or may submit a statement to the department at least one year before the discharge permit expiration date certifying that the dairy facility has not been and will not be constructed or operated and that no discharges have occurred or will occur. Upon the department's verification of the certification, the department shall terminate the discharge permit, if necessary, and retire the discharge permit number from use.

C. Instead of the information required by Subsection C of 20.6.2.3106 NMAC, an applicant:

(1) for a new discharge permit, shall provide the information and supporting technical documentation pursuant to this section and 20.6.6.11 NMAC;

(2) for a renewed or modified discharge permit, shall provide the information and supporting technical documentation pursuant to this section and 20.6.6.12 NMAC; or

(3) for a renewed discharge permit for closure, shall provide the information and supporting technical documentation pursuant to this section and 20.6.6.13 NMAC.

D. The department shall create a discharge permit application form specific to dairy facilities to collect the information required by this section. An applicant shall use the form to provide the information required by this section. An application shall consist of the form and required supporting documentation, regardless of previous submissions. The applicant shall attest to the truth of the information and supporting documentation in the application, and sign the form. The form shall be signed in the presence of a notary and notarized.

E. If an applicant filing an application for a new discharge permit does not certify that the dairy facility complies with the setback requirements of 20.6.6.16 NMAC, as required by Subsection D of 20.6.6.11 NMAC, the department shall reject the application. The department shall provide notice of the rejection to the applicant by certified mail.

F. Within 60 days of the department's receipt of proof of notice pursuant to Subsection D of 20.6.2.3108 NMAC, the department shall review the application for technical completeness. If proof of notice is not submitted to the department pursuant to Subsection D of 20.6.2.3108 NMAC, the department may deny the application.

G. For an application to be deemed technically complete, an application shall include the information required by Subsection C of this section. If the department determines that an application is not technically complete, the department shall provide notice of technical deficiency to the applicant by certified mail within 60 days of receipt of the applicant's proof of notice. The applicant shall have 30 days from the date of the notice of technical deficiency to provide the information required by this section.

(1) If an application is technically complete, the department shall make available a proposed approval of a discharge permit (i.e., draft discharge permit) or denial of a discharge permit application, pursuant to Subsection H of 20.6.2.3108 NMAC.

(2) If an applicant filing an application for a new discharge permit does not provide all information required by this section to the department within 30 days of the date of the notice of technical deficiency, the department shall deny the application. The department shall provide notice of denial to the applicant by certified mail.

(3) If an applicant for a renewed or modified discharge permit does not provide all information required by this section to the department within 30 days of the date of the notice of technical deficiency, the department may deny the application or propose a discharge permit for approval consistent with the requirements of ~~these regulations~~ the dairy rule.

(a) If the department denies the application, the department shall provide notice of denial to the applicant by certified mail.

(b) If the department proposes approval of the discharge permit and the secretary approves the discharge permit, the permittee shall submit the required information in the notice of technical deficiency within 30 days of the effective date of the discharge permit.

H. If the department proposes an additional condition in a discharge permit that is not included in the dairy rule, the department shall include a written explanation of the reason for the additional condition with the copy of the proposed approval sent to the applicant pursuant to Subsection H of 20.6.2.3108 NMAC. Written comments about the additional condition may be submitted to the department during the 30-day comment period provided by Subsection K of 20.6.2.3108 NMAC. A hearing may be requested about the additional condition as provided by 20.6.6.15 NMAC.

I. With the exception of Subparagraph (a) of Paragraph (3) of Subsection C of 20.6.2.3109 NMAC and provided that the requirements of 20.6.6.10 NMAC are met, the secretary shall approve a discharge permit or deny an application for a discharge permit pursuant to 20.6.2.3109 NMAC.

[20.6.6.10 NMAC - N, xx/xx/2010]

20.6.6.11 APPLICATION REQUIREMENTS FOR NEW DISCHARGE PERMITS:

A. An application for a new discharge permit shall include the information in this section.

B. Contact Information: An application shall include the:

(1) applicant's name, title and affiliation with the dairy facility, mailing address, and phone number;

(2) dairy facility manager's or operator's name, title and affiliation with the dairy facility, mailing address and phone number;

(3) application preparer's name, title and affiliation with the dairy facility, mailing address, phone number and signature; and

(4) mailing address and phone number of any consultants contracted to assist the dairy facility with compliance with the Water Quality Act, 20.6.2 NMAC, and 20.6.6.NMAC.

C. Ownership and Real Property Agreements:

(1) An application shall include the dairy facility owner's name, title, mailing address and phone number.

(a) If more than one person has an ownership interest in the dairy facility, then the applicant shall list all persons having an ownership interest in the dairy facility, including their names, titles, mailing addresses and phone numbers.

(b) If any corporate entity, including but not limited to a corporation or a limited liability company, holds an ownership interest in the dairy facility, then the applicant shall also list the name(s), as filed with the New Mexico public regulation commission, of the corporate entity, the corporate entity's registered agent's name and address, and the names of each of the corporate entity's directors, officers, members or partners.

(2) If the applicant is not the owner of record of the real property upon which the dairy facility is or will be situated, or upon which dairy operations and land application will occur, then the applicant shall submit a copy of any lease agreement or other agreement which authorizes the use of the real property for the duration of the term of the requested permit. Lease prices or other price terms may be redacted.

D. Setbacks: The applicant shall certify that the setback requirements of 20.6.6.16 NMAC are met. An application shall include a scaled map of the dairy facility layout demonstrating that the proposed layout of the dairy facility meets the setback requirements of 20.6.6.16 NMAC.

E. Dairy Facility Information and Location: An application shall include:

(1) the dairy facility name, physical address and county; and

(2) the township, range and section for the entire dairy facility, which includes the production area and fields within the land application area.

F. Public Notice Preparation: An application shall include the name of a newspaper of general circulation in the location of the dairy facility for the future display ad publication, the proposed public location(s) for posting of the 2-foot by 3-foot sign, and the proposed off-site public location for posting of the 8.5-inch by 11-inch flyer, as required by 20.6.2.3108 NMAC.

G. Pre-Discharge Total Dissolved Solids Concentration in Ground Water: Pursuant to Paragraph (3) of Subsection C of 20.6.2.3106 NMAC, an application shall include the pre-discharge total dissolved solids concentration from analytical results of ground water obtained from the on-site test boring pursuant to Subsection Z of 20.6.6.20 NMAC. A copy of the laboratory analysis stating the pre-discharge total dissolved solids concentration shall be submitted with the application.

H. Discharge Volume: An application shall include:

(1) the proposed maximum daily discharge volume, and a description of the methods and calculations used to determine the proposed discharge volume;

(2) the identification of all sources of wastewater which may include, but are not limited to, hospital barns, maternity barns, bottle-washing operations and parlor/equipment washdown;

(3) the animal washing method(s) employed and the estimated daily wastewater volume generated by the method(s); and

(4) information regarding other wastewater discharges (i.e., domestic or industrial) at the dairy facility not generated by dairy operations; permit identification numbers shall be submitted for those discharges that are already permitted.

I. Wastewater Quality: An application shall include estimated concentrations of wastewater quality for total dissolved solids, chloride, total sulfur~~sulfate~~, nitrate as nitrogen, total Kjeldahl nitrogen and other constituents of concern related to the standards of 20.6.2.3103 NMAC that may be contained in the wastewater at the dairy facility based on data collected at other dairy facilities with similar discharge(s) volumes and wastewater management systems.

J. Identification and Physical Description of the Dairy Facility: An application shall include:

(1) a scaled map of the entire dairy facility pursuant to Subsection W of 20.6.6.20 NMAC;

(2) the identification of each proposed impoundment, including information about its location, purpose (i.e., to store wastewater or stormwater, or dispose of it by evaporation), liner material and storage or evaporative disposal capacity;

(3) the identification of each field within the proposed land application area, including information about its location, acreage, proposed method of wastewater and stormwater application and proposed method of irrigation water application;

(4) the identification of proposed additional wastewater and stormwater system components such as, but not limited to, sumps and mix tanks, including information for each component regarding its location, purpose, construction material, dimensions and capacity; and

(5) a description of the proposed location of all manure, silage and compost storage areas at the dairy facility, including a description of the proposed method(s) employed to protect each area from stormwater runoff and run-on, and to minimize leachate.

K. Flow Metering: An application shall describe a dairy facility's flow metering system pursuant to Subsections K, L, M, N, O and P of 20.6.6.20 NMAC and Subsections I and J of 20.6.6.21 NMAC, including:

(1) the identification of the method(s) (i.e., pumped versus gravity flow) of wastewater discharge, stormwater transfer and wastewater and stormwater land application;

(2) the proposed flow measurement devices for each flow method; and

(3) the identification of flow meter locations.

L. Depth-to-Most-Shallow Ground Water and Ground Water Flow Direction: An application shall include:

(1) the depth-to-most-shallow ground water measurements from the one site-specific test boring pursuant to Subsection Z of 20.6.6.20 NMAC; and

(2) the ground water flow direction of the most-shallow ground water beneath the dairy facility ~~shall~~ be based on the most recent regional water level data or published hydrogeologic information; survey data from nearby monitoring wells and a ground water elevation contour map indicating the direction of ground water flow may be included; the sources of all information used to determine ground water flow direction shall be provided with the application.

M. Monitoring Wells: An application shall include the proposed monitoring well locations pursuant to Subsections A and B of 20.6.6.23 NMAC.

N. Surface Soil Survey and Vadose Zone Geology: An application shall include:

(1) the most recent regional soil survey map and associated descriptions identifying surface soil type(s); and

(2) the lithologic log obtained from the on-site test boring pursuant to Subsection Z of 20.6.6.20 NMAC to identify the geological profile of the vadose zone.

O. Location Map: An application shall include a location map with topographic surface contours identifying all of the following features located within a one-mile radius of the dairy facility:

(1) watercourses, lakebeds, sinkholes, playa lakes and springs (springs used to provide water for human consumption shall be so denoted);

(2) wells supplying water for a public water system and private domestic water wells;

(3) irrigation supply wells; and

(4) ditch irrigations systems, acequias, irrigation canals and drains.

P. Flood Zone Map: An application shall include the most recent 100-year flood zone map developed by the federal emergency management administration, FEMA, documenting flood potential for the dairy facility, and a description of any engineered measures used for flood protection.

Q. Engineering and Surveying: Pursuant to 20.6.6.17 NMAC an application shall include:

(1) plans and specifications for impoundments and associated liners;

(2) plans and specifications for a manure solids separator(s); and

(3) a grading and drainage report and plan.

R. Land Application Area: For a dairy facility with a land application area, an application shall include:

(1) documentation of irrigation water rights pursuant to Subsection D of 20.6.6.21 NMAC;

(2) a nutrient management plan (NMP) pursuant to Subsections K and L of 20.6.6.21 NMAC; and

(3) a written description of the wastewater sampling location(s) between the manure solids separator(s) and wastewater impoundment(s) pursuant to Subsection C of 20.6.6.25 NMAC.

[20.6.6.11 NMAC - N, xx/xx/2010]

20.6.6.12 APPLICATION REQUIREMENTS FOR DISCHARGE PERMIT RENEWAL OR MODIFICATION:

A. An application for a renewed or modified discharge permit shall include the information in this section.

B. Contact Information: An application shall include the:

(1) applicant's name, title and affiliation with the dairy facility, mailing address, and phone number;

(2) dairy facility manager's or operator's name, title and affiliation with the dairy facility, mailing address and phone number;

(3) application preparer's name, title and affiliation with the dairy facility, mailing address, phone number and signature; and

(4) mailing address and phone number of any consultants contracted to assist the dairy facility with compliance with the Water Quality Act and 20.6.2 NMAC.

C. Ownership and Real Property Agreements:

(1) An application shall include the dairy facility owner's name, title, mailing address and phone number.

(a) If more than one person has an ownership interest in the dairy facility, then the applicant shall list all persons having an ownership interest in the dairy facility, including their names, titles, mailing addresses and phone numbers.

(b) If any corporate entity, including but not limited to a corporation or a limited liability company, holds an ownership interest in the dairy facility, then the applicant shall also list the name(s), as filed with the New Mexico public regulation commission, of the corporate entity, the corporate entity's registered agent's name and address, and the names of each of the corporate entity's directors, officers, members or partners.

(2) If the applicant is not the owner of record of the real property upon which the dairy facility is or will be situated, or upon which dairy operations and land application will occur, then the applicant shall submit a copy of any lease agreement or other agreement which authorizes the use of the real property for the duration of the term of the requested permit. Lease prices or other price terms may be redacted.

D. Dairy Facility Information and Location: An application shall include:

(1) the dairy facility name, physical address and county;

(2) the township, range and section for the entire dairy facility, which includes the production area and fields within the land application area; and

(3) the date of initial discharge at the dairy facility.

E. Public Notice Preparation:

(1) An application for a modified or renewed and modified discharge permit shall include the name of a newspaper of general circulation in the location of the dairy facility for the future display ad publication, the proposed public location(s) for posting of the 2-foot by 3-foot sign, and the proposed off-site public location for posting of the 8.5-inch by 11-inch flyer, as required by Subsection B of 20.6.2.3108 NMAC.

(2) An application for a renewed discharge permit without modification shall include the name of a newspaper of general circulation in the location of the dairy facility for the future display ad publication as required by Subsection C of 20.6.2.3108 NMAC.

F. Pre-Discharge Total Dissolved Solids Concentration in Ground Water: Pursuant to Paragraph (3) of Subsection C of 20.6.2.3106 NMAC, an application shall include the pre-discharge total dissolved solids concentration in ground water, sample source (e.g., upgradient monitoring well, on-site supply well, nearby off-site supply well) and a copy of the laboratory analysis.

G. Discharge Volume: An application shall include:

(1) the proposed maximum daily discharge volume and a description of the methods and calculations used to determine the proposed discharge volume;

(2) the identification of all sources of wastewater which may include, but are not limited to, hospital barns, maternity barns, bottle-washing operations and parlor/equipment washdown;

(3) the animal washing method(s) employed and the estimated daily wastewater volume generated by the method(s); and

(4) information regarding other wastewater discharges (i.e., domestic or industrial) at the dairy facility not generated by dairy operations; permit identification numbers shall be submitted for those discharges that are already permitted.

H. Identification and Physical Description of Dairy Facility: An application shall include:

(1) a scaled map of the entire dairy facility pursuant to Subsection W of 20.6.6.20 NMAC;

(2) the identification of each proposed, existing and closed impoundment, including information for each impoundment regarding its location, purpose (i.e., to store wastewater or stormwater, or dispose of it by evaporation), date of original construction, past and existing liner material, date of current liner installation and storage or evaporative disposal capacity;

(3) the identification of each existing, proposed, and previously used field within the land application area, including information for each field about its location, date of initial application of wastewater or stormwater, acreage, status with regard to having received wastewater or stormwater (i.e. never, inactive, active), current method of backflow prevention employed, current method of wastewater and stormwater application and current method of irrigation water application;

(4) the identification of additional wastewater and stormwater system components such as, but not limited to, sumps and mix tanks, including information for each component regarding its location, purpose, date of original construction, construction material, dimensions and capacity;

(5) the settled solids thickness measurements for each existing wastewater and combination impoundment pursuant to Subsection D of 20.6.6.20 NMAC;

(6) a description of proposed and existing method(s) of solids separation pursuant to Paragraph (5) of Subsection C of 20.6.6.17 NMAC and Subsection F of 20.6.6.20 NMAC; and

(7) a description of the location of all manure, silage and compost storage areas at the dairy facility; and a description of the method(s) employed to protect each area from stormwater runoff and run-on, and to minimize leachate.

I. Flow Metering: An application shall describe a dairy facility's flow metering system pursuant to Subsections K, L, M, N, O and P of 20.6.6.20 NMAC and Subsections I and J of 20.6.6.21 NMAC including:

(1) the identification of the method(s) (i.e. pumped versus gravity flow) of wastewater discharge, stormwater transfer and wastewater and stormwater land application;

(2) a description of the existing and proposed flow measurement devices for each flow method; and

(3) the identification of flow meter locations.

J. Depth-to-Most-Shallow Ground Water and Ground Water Flow Direction:

(1) An application for renewal or modification shall provide the depth-to-most-shallow ground water and indicate ground water flow direction beneath the dairy facility on a ground water elevation contour map. The ground water elevation contour map shall be developed based upon the most recent ground water levels obtained with a water level measuring device and survey data from on-site monitoring wells obtained from a survey, pursuant to 20.6.6.23 NMAC.

(2) If a dairy facility does not have a monitoring well intersecting most-shallow ground water, an applicant shall provide:

(a) the depth-to-most-shallow ground water measurements from the one site-specific test boring pursuant to Subsection Z of 20.6.6.20 NMAC; and

(b) the ground water flow direction of the most-shallow ground water beneath the dairy facility based upon the most recent regional water level data or published hydrogeologic information; survey data from nearby monitoring wells and a ground water elevation contour map indicating the direction of ground water flow may be included; the sources of all information used to determine ground water flow direction shall be provided with the application.

K. Monitoring Wells: An application shall include:

(1) the construction logs for all existing, on-site monitoring wells, which indicate the date of installation and well driller; and

(2) the identification of monitoring well locations, proposed and existing, pursuant to Subsections A and B of 20.6.6.23 NMAC.

L. Surface Soil Survey and Vadose Zone Geology: An application shall include:

(1) the most recent regional soil survey map and associated descriptions identifying surface soil type(s);

(2) the lithologic logs from all existing, on-site monitoring wells; and

(3) if a dairy facility does not have a monitoring well intersecting most-shallow ground water, the application shall include the lithologic log obtained from the on-site test boring pursuant to Subsection Z of 20.6.6.20 NMAC to identify the geological profile of the vadose zone.

M. Location Map: An application shall include a location map with topographic surface contours identifying all of the following features located within a one-mile radius of the dairy facility:

(1) watercourses, lakebeds, sinkholes, playa lakes and springs (springs used to provide water for human consumption shall be so denoted);

(2) wells supplying water for a public water system and private domestic water wells;

(3) irrigation supply wells; and

(4) ditch irrigations systems, acequias, irrigation canals and drains.

N. Flood Zone Map: An application shall include the most recent 100-year flood zone map developed by the federal emergency management administration, FEMA, documenting flood potential for the dairy facility, and a description of any engineered measures used for flood protection.

O. Engineering and Surveying: An application shall include:

(1) plans and specifications for new or improved structures and associated liners proposed by the applicant pursuant to 20.6.6.17 NMAC;

(2) record drawings and final specifications for existing structures and associated liners; for existing impoundments where record drawings and final specifications do not exist, survey data and capacity calculations shall be submitted pursuant to Subsection C of 20.6.6.20 NMAC; and

(3) a grading and drainage report and plan pursuant to Paragraph (6) of Subsection C of 20.6.6.17 NMAC.

P. Land Application Area: For a dairy facility with a land application area, an application shall include:

(1) documentation of irrigation water rights pursuant to Subsection D of 20.6.6.21 NMAC;

(2) documentation confirming the existence of infrastructure necessary to distribute and apply wastewater and stormwater to the land application area pursuant to Subsection G of 20.6.6.21 NMAC;

(3) a nutrient management plan (NMP) pursuant to Subsections K and L of 20.6.6.21 NMAC; and

(4) a written description of the wastewater sampling location(s) between the manure solids separator(s) and wastewater impoundment(s) pursuant to Subsection C of 20.6.6.25 NMAC.

[20.6.6.12 NMAC - N, xx/xx/2010]

20.6.6.13 APPLICATION REQUIREMENTS FOR A DISCHARGE PERMIT FOR CLOSURE: An application for a discharge permit for closure shall include the information required by Subsections B, C, D, E, F, J, K, L, M and N of 20.6.6.12 NMAC and Paragraphs (1), (2), (3) and (4) of Subsection H of 20.6.6.12 NMAC. For dairy facilities with or previously having a land application area, the application shall also include Paragraph (2) of Subsection P of 20.6.6.12 NMAC, specifically pertaining to the past method(s) of wastewater discharge and stormwater application to the land application area.
[20.6.6.13 NMAC - N, xx/xx/2010]

20.6.6.14 ADDITIONAL PUBLIC NOTICE REQUIREMENTS FOR APPLICATIONS FOR NEW DISCHARGE PERMITS:

A. The requirements of this section shall apply to dairy facilities whose application for a new discharge permit is received by the department after the effective date of the dairy rule.

B. Instead of the requirement for public notice specified in Paragraph (2) of Subsection B of 20.6.2.3108 NMAC, the applicant shall provide written notice of the discharge by mail to owners of record of all properties within a one-mile distance from the boundary of the property where the discharge site is located. If there are no properties other than properties owned by the discharger within a one-mile distance of the boundary of the property where the dairy facility is located, the applicant shall provide notice to owners of record of the next nearest properties not owned by the discharger.

C. Proof of notice required by Subsection D of 20.6.2.3108 NMAC shall include an affidavit of mailing(s) and a list of property owner(s) notified pursuant to Subsection B of this section.
[20.6.6.14 NMAC - N, xx/xx/2010]

20.6.6.15 PROCEDURES FOR REQUESTING PUBLIC HEARINGS ON PERMITTING ACTIONS FOR DAIRY FACILITIES:

A. Requests for a hearing from any person, including the applicant for a discharge permit, on the proposed approval of a discharge permit (i.e., a draft discharge permit) or denial of a discharge permit application shall be postmarked on or before the end of the comment period, and submitted to the department pursuant to Subsection K of 20.6.2.3108 NMAC. The secretary shall deny requests that do not meet the requirements of Subsection K of 20.6.2.3108 NMAC and this section. The secretary shall provide notice of hearing denial by certified mail to the person(s) requesting a hearing.

B. The secretary shall deny a request for a hearing on the proposed approval of a discharge permit for a dairy facility (i.e., a draft discharge permit) disputing conditions contained in the dairy rule. Requests for a hearing on the proposed approval of a discharge permit for a dairy facility shall identify the specific additional discharge permit conditions being disputed or requested and the reasons such additional discharge permit conditions are being disputed or requested. Hearings held upon the secretary's approval shall be limited in scope to the disputed or requested additional discharge permit conditions identified in the request for hearing. The secretary shall deny requests for a hearing that fail to identify disputed or requested additional discharge permit conditions and the reasons why the additional discharge permit conditions are disputed or requested . The secretary shall provide notice of hearing denial by certified mail to the person(s) requesting a hearing.
[20.6.6.15 NMAC - N, xx/xx/2010]

20.6.6.16 SETBACK REQUIREMENTS FOR DAIRY FACILITIES APPLYING FOR NEW DISCHARGE PERMITS:

A. The setback requirements of this section apply to a dairy facility whose application for a new discharge permit is received by the department after the effective date of the dairy rule.

B. The setback requirements shall be measured as horizontal map distances as of the receipt date of the application for a new discharge permit by the department.

C. If the setback requirements apply to a dairy facility, a permittee shall not propose or construct structures that violate the setback as determined as of the receipt date of the application for a new discharge permit by the department.

D. Production Area Setback Requirements:

(1) The production area, excluding feed storage silos, feed storage barns and liquid feed tanks, shall be located:

(a) greater than 200 feet from the 100-year flood zone of any watercourse, or from the ordinary high-water mark of any watercourse for which no 100-year flood zone has been established; this setback distance shall not apply to ditch irrigations systems, acequias, irrigation canals and drains;

(b) greater than 200 feet (measured from the ordinary high-water mark) from a lakebed, sinkhole or playa lake;

(c) greater than 200 feet from any spring identified on a US geological survey (USGS) topographic map and not identified as a supply of water for human consumption;

(d) greater than 350 feet from a private domestic water well or spring that supplies water for human consumption; and

(e) greater than 1000 feet from any water well or spring that supplies water for a public water system as defined by 20.7.10 NMAC, unless a wellhead protection program established by the public water system requires a greater distance.

(2) The requirements of Subparagraph (d) of Paragraph (1) of this subsection shall not apply to wells or springs that supply water to the dairy facility for human consumption and are located on the dairy facility.

(3) Setback distances for impoundments shall be measured from the top inside edge of the impoundment; distances for all other features shall be measured from the outer extent of the feature.

E. Land Application Area Setback Requirements:

(1) Any field within a land application area shall be located:

(a) greater than 100 feet from the 100-year flood zone of any watercourse, or from the ordinary high-water mark of any watercourse for which no 100-year flood zone has been established; this setback distance shall not apply to ditch irrigations systems, acequias, irrigation canals and drains;

(b) greater than 100 feet (measured from the ordinary high-water mark) from any lakebed, sinkhole or playa lake;

(c) greater than 100 feet from a private domestic water well or spring that supplies water for human consumption; and

(d) greater than 200 feet from any water well or spring that supplies water for a public water system as defined by 20.7.10 NMAC, unless a wellhead protection program established by the public water system requires a greater distance.

(2) The requirements of Subparagraph (c) of Paragraph (1) of this subsection shall not apply to wells or springs that supply water for human consumption to the dairy facility and are located on the dairy facility.

(3) Setback distances for fields shall be measured from the outer edge of the field.

[20.6.6.16 NMAC - N, xx/xx/2010]

20.6.6.17 ENGINEERING AND SURVEYING REQUIREMENTS FOR ALL DAIRY FACILITIES:

A. Practice of Engineering: All plans and specifications, supporting design calculations, record drawings, final specifications, final capacity calculations, grading and drainage reports and plans, and other work products requiring the practice of engineering shall bear the seal and signature of a licensed New Mexico professional engineer pursuant to the New Mexico Engineering and Surveying Practice Act, Sections 61-23-1 through 61-23-32 NMSA 1978, and the rules promulgated under that authority.

B. Practice of Surveying: All surveys of wastewater, stormwater, and combination wastewater/stormwater impoundments, monitoring well locations and casing elevations, and other work products requiring the practice of surveying shall bear the seal and signature of a licensed New Mexico professional surveyor pursuant to the New Mexico Engineering and Surveying Practice, Sections 61-23-1 through 61-23-32 NMSA 1978, and the rules promulgated under that authority.

C. Engineering Plans and Specifications Requirements:

(1) **Impoundment plans and specifications.** An applicant or permittee proposing or required to construct a new impoundment or to improve an existing impoundment, including relining of an existing impoundment, shall submit detailed and complete construction plans and specifications and supporting design calculations developed pursuant to this section and 20.6.6.20 NMAC. The applicant or permittee proposing or required to construct an impoundment shall document compliance with the requirements of the dam safety bureau of the state engineer pursuant to Section 72-5-32 NMSA 1978, and rules promulgated under that authority, unless exempt by law from such requirements. The construction plans and specifications for an improvement(s) to an existing impoundment shall address the management of wastewater or stormwater during preparation and construction of the improvements.

(a) Construction plans and specifications proposed by the applicant or permittee shall be submitted to the department with the application for a new, renewed or modified discharge permit.

(b) Construction plans and specifications not proposed by the applicant or permittee but required to achieve compliance with the dairy rule shall be submitted to the department within 90 days of the effective date of the discharge permit.

(2) **Impoundment CQA/CQC.** Construction of a new impoundment or improvement to an existing impoundment shall be done in accordance with a construction quality assurance/construction quality control (CQA/CQC) plan. A CQA/CQC plan shall be included as part of the design plans and specifications. The CQA/CQC plan shall outline the observations and tests to be used to ensure that construction of the impoundment meets, at a minimum, all design criteria, plans and specifications. All testing and evaluation reports shall be signed and sealed by a licensed New Mexico professional engineer experienced in lagoon construction and liner installation. The CQA/CQC plan shall include, at a minimum, the following elements.

(a) The identity of persons responsible for overseeing the CQA/CQC program. The person responsible for overseeing with the CQA/CQC plan shall be a licensed New Mexico professional engineer experienced in lagoon construction and liner installation, and have at least three years experience in lagoon construction and lining.

(b) A discussion of how inspections will be performed.

(c) The location, availability, applicability and calibration of testing equipment and facilities, both field and laboratory.

(d) The procedures for observing and testing the liner material.

(e) The procedures for reviewing inspection test results and laboratory and field sampling test results.

(f) The actions to be taken to replace or repair liner material should deficiencies be identified.

(g) The procedures for seaming synthetic liners.

(h) The reporting procedures for all inspections and test data.

(3) **Impoundment improvement - wastewater/stormwater management.** An applicant or permittee proposing or required to improve an existing impoundment, including relining of an existing impoundment, shall submit a plan for managing wastewater or stormwater during the improvement as part of the design plans and specifications. The plan for wastewater or stormwater management shall include the following minimum elements and be implemented upon department approval:

(a) a description of how on-going wastewater discharges or stormwater collection will be handled and disposed of during improvement to the impoundment;

(b) a description of how solids and wastewater or stormwater within the impoundment will be removed and disposed of prior to beginning improvement to the impoundment;

(c) a schedule for implementation through completion of the project; and

(d) if the plan proposes temporary use of a location for the discharge of wastewater not authorized by the effective discharge permit, the applicant or permittee shall request temporary permission to discharge from the department.

(4) **Manure solids separation plans and specifications - new wastewater system.** An applicant or permittee proposing or required to construct a new manure solids separator as a component of a newly designed wastewater storage or disposal system shall submit construction plans and specifications and supporting design calculations that include the separator, pursuant to this section.

(a) Construction plans and specifications proposed by the applicant or permittee shall be submitted to the department with the application for a new, renewed or modified discharge permit.

(b) Construction plans and specifications not proposed by the applicant or permittee but required to achieve compliance with the dairy rule shall be submitted to the department within 90 days of the effective date of the discharge permit.

(5) **Manure solids separation plans and specifications - existing wastewater system.** An applicant or permittee proposing or required to construct a new manure solids separator as a component of an existing wastewater storage or disposal system shall submit a scaled design schematic and supporting documentation, including design calculations. The separator shall be designed to accommodate, at a minimum, the maximum daily discharge volume authorized by the discharge permit, and the volume of manure solids associated with the wastewater discharge. Components of the separator that collect, contain or store manure solids prior to removal or land application shall be designed with an impervious material(s) to minimize generation and infiltration of leachate.

(a) A scaled design schematic and supporting documentation for a proposed separator shall be submitted to the department with the application for a new, renewed or modified discharge permit.

(b) A scaled design schematic and supporting documentation for a separator not proposed by the applicant or permittee but required to achieve compliance with the dairy rule shall be submitted to the department within 90 days of the effective date of the discharge permit.

(6) **Grading and drainage report and plan.** An applicant or permittee shall submit with the application for a new, renewed or modified discharge permit, a grading and drainage report and a grading and drainage plan, including supplemental information associated with the plan.

(a) The grading and drainage report shall include, at a minimum, the following information: a description of the drainage concept for the dairy facility; a description of existing drainage conditions at the dairy facility; a description of the proposed post-development drainage conditions; a description of the calculations performed to support the drainage analysis; and a map prepared from a 7.5 minute quadrangle map showing the dairy facility location and drainage basin influences on drainage flows at the dairy facility from on-site and off-site locations.

(b) The grading and drainage plan shall include, at a minimum, the following information: north arrow and scale; property boundaries; delineation of off-site watersheds that contribute drainage to the dairy facility; permanent benchmark locations, descriptions and elevations; existing and proposed land contours; spot elevations at key points, grade breaks, critical locations, floors or pads of existing and proposed structures, and inverts of piping associated with the drainage system; identification of all existing and proposed on-site structures, including drainage features; identification of internal contributory drainage areas, including roof areas, parking lots, and other disturbed areas; flows in cubic feet/second and flow lines defined by arrows and spot elevations; and details of impoundments, inlets, rundowns, emergency spillways, impoundment outlets, slopes, and all other significant drainage structures with contours, cross-sections and spot elevations.

(c) Supplemental information supporting the grading and drainage plan shall be submitted to the department with the plan and shall include, at a minimum, the following information: calculations for both existing and post-development drainage conditions; hydraulic calculations demonstrating capacity or adequacy of existing and proposed stormwater impoundments; hydraulic calculations demonstrating capacity of existing and proposed conveyance channels to contain and transport runoff to the stormwater impoundment(s); and a description of computer software, documents, circulars, manuals, etc. used to develop the drainage calculations.

(7) **Flow metering plans and specifications.** An applicant or permittee proposing or required to install a flow meter(s) shall submit construction plans and specifications for each device.

(a) Construction plans and specifications proposed by the applicant or permittee shall be submitted to the department with the application for a new, renewed or modified discharge permit.

(b) Construction plans and specifications not proposed by the applicant or permittee but required to achieve compliance with the dairy rule shall be submitted to the department within 90 days of the effective date of the discharge permit.

D. Engineering Design Requirements:

(1) **Impoundment capacities - wastewater or wastewater/stormwater combination.**

(a) Capacity requirements for dairy facilities discharging to a land application area.

(i) The wastewater impoundments intended to store wastewater prior to discharging to a land application area shall be designed to contain collectively the maximum daily discharge volume authorized by the discharge permit for a minimum period of 60 days to accommodate periods when land application is not feasible, while preserving two feet of freeboard.

(ii) The combination wastewater/stormwater impoundments intended to contain both wastewater and stormwater runoff for storage prior to discharging to a land application area shall be designed to contain collectively the maximum daily discharge volume authorized by the discharge permit for a minimum period of 60 days to accommodate periods when land application is not feasible; and stormwater runoff and direct precipitation as specified by current EPA regulatory requirements for concentrated animal feeding operations pursuant to 40 Code of Federal Regulations, Parts 122 and 412, as amended, while preserving two feet of freeboard.

(b) Capacity requirements for dairy facilities discharging to an evaporative wastewater disposal system.

(i) The wastewater impoundments intended to dispose of wastewater by evaporation shall be designed to contain collectively the maximum daily discharge volume authorized by the discharge permit for disposal by evaporation, while preserving two feet of freeboard.

(ii) The combination wastewater/stormwater impoundments intended to dispose of both wastewater and stormwater runoff by evaporation shall be designed to contain collectively the maximum daily discharge volume authorized by the discharge permit; and stormwater runoff and direct precipitation as specified by

current EPA regulatory requirements for concentrated animal feeding operations pursuant to 40 Code of Federal Regulations, Parts 122 and 412, as amended, for disposal by evaporation while preserving two feet of freeboard.

(c) An impoundment designed and used for solids settling shall not be used to satisfy the impoundment capacity requirements of this subsection.

(2) **Impoundment capacity - stormwater.** Stormwater impoundments intended to contain only stormwater shall be designed to contain stormwater runoff and direct precipitation as specified by current EPA regulatory requirements for concentrated animal feeding operations pursuant to 40 Code of Federal Regulations, Parts 122 and 412, as amended.

(3) **Stormwater conveyance channels.** Stormwater conveyance channels shall be designed to contain and transport stormwater runoff and direct precipitation to stormwater impoundments as specified by current EPA regulatory requirements for concentrated animal feeding operations pursuant to 40 Code of Federal Regulations, Parts 122 and 412, as amended.

(4) **Impoundment design and construction - general.** Impoundments shall meet the following design and construction requirements:

(a) the inside slopes shall be a maximum of three (horizontal) to one (vertical), and a minimum of four (horizontal) to one (vertical);

(b) the outside slopes shall be a maximum of three (horizontal) to one (vertical);

(c) the sub-grade shall be compacted to a minimum of 95 percent of standard proctor density;

(d) the finished grade of the floor of the impoundment shall be as uniform as possible and shall not have surface deviations which vary more than plus or minus~~+/-~~ 1.5 inches from the finished grade; and

(e) the minimum dike width shall be eight feet to allow vehicle traffic for maintenance.

(5) **Impoundment design and construction - liner.** All impoundments shall be lined in accordance with this section, unless otherwise specified in the dairy rule. Impoundment liners shall meet the following additional design and construction requirements.

(a) The liner shall be installed with sufficient slack in the liner material to accommodate shrinkage due to temperature changes. Folds in the liner material shall not be present in the completed liner.

(b) The sub-grade shall be free of sharp rocks, vegetation and stubble to a depth of at least six inches below the liner. Liners shall be placed on a sub-grade of sand or fine soil. The surface in contact with the liner shall be smooth to allow for good contact between liner and sub-grade. The surface shall be dry during liner installation.

(c) The liner shall be anchored in an anchor trench. The trench shall be a minimum of 12 inches wide, 12 inches deep and shall be set back at least 24 inches from the top inside edge of the impoundment.

(d) The liner panels shall be oriented such that all sidewall seams are vertical.

(e) A liner vent system shall be installed if an impoundment is installed over areas of decomposing organic materials.

(f) Any opening in the liner through which a pipe or other fixture protrudes shall be sealed in accordance with the liner manufacturer's requirements. Liner penetrations shall be detailed in the construction plans and record drawings.

(g) The liner shall be installed by, or the installation supervised by, an individual that has the necessary training and experience as required by the liner manufacturer.

(h) Manufacturer's installation and field seaming guidelines shall be followed.

(i) Liner seams shall be field tested by the installer and verification of the adequacy of the seams shall be submitted to department along with the record drawings.

(j) Concrete slabs installed on top of a liner for operational purposes shall be completed in accordance with manufacturer and installer recommendations to ensure liner integrity.

(6) **Impoundment liner - wastewater or wastewater/stormwater combination.** An applicant or permittee proposing or required to construct a new or to improve an existing wastewater or combination wastewater/stormwater impoundment, shall, at a minimum, utilize a liner meeting the following requirements.

(a) Where the vertical distance between the seasonal high ground water level and the finished grade of the floor of the impoundment is less than or equal to 50 feet as documented through the most recent ground water data obtained from an on-site test boring(s) or monitoring well(s), the impoundment shall, at a minimum, utilize an upper (primary) and lower (secondary) liner. The upper liner material shall be a minimum of 60-mil high density polyethylene (HDPE) or other material having equivalent characteristics with regard to permeability, resistance to degradation by ultraviolet light, compatibility with the liquids anticipated to be collected in the impoundment, tensile strength, and tear and puncture resistance. The lower liner material shall be a minimum of 40-mil HDPE or other material having equivalent characteristics with regard to permeability, compatibility with the

liquids anticipated to be collected in the impoundment, tensile strength, and tear and puncture resistance. A leak detection system shall be constructed between the upper and lower liners and shall consist of a drainage layer, filter layer, fluid collection pipes, fluid collection sumps, and fluid removal system.

(i) A drainage layer shall be constructed of granular soil materials or geosynthetic drainage net (geonet). The drainage material shall have a hydraulic conductivity of 10^{-2} centimeters/second or greater. The drainage layer shall be constructed with a slope of at least two percent.

(ii) A filter layer shall be constructed above the drainage layer and below the upper liner. A filter layer above a granular drainage layer shall be composed of granular soil materials that are finer than the granular drainage layer or a geotextile filter fabric. A geotextile filter fabric shall be used as a filter layer above a geosynthetic drainage net. A filter layer shall provide for adequate flow of fluid through the filter while providing adequate retention of fine particles.

(iii) Perforated fluid collection pipes shall be installed to transmit fluid from the drainage layer to a fluid collection sump(s). Collection pipe material, diameter, wall thickness, and slot size and distribution shall be sufficient to prevent deflection, buckling, collapse or other failure. Collection pipes shall be installed with slopes equivalent to the slope of the drainage layer. Collection pipe systems shall be designed to allow for cleaning of all collection pipes with standard pipe cleaning equipment.

(iv) A fluid removal system shall be installed to remove fluid from the leak detection system. The fluid removal system shall consist of a sump(s), a dedicated pump(s), an automated pump activation system that activates the pump(s) when a specific fluid level is reached in a sump(s), a totalizing flow meter to measure to measure the volume of leachate pumped from the system, and an automated alarm system that provides warning of pump failure.

(b) Where the vertical distance from the seasonal high ground water level and the finished grade of the floor of the impoundment is greater than 50 feet as documented through the most recent ground water data obtained from an on-site test boring(s) or monitoring well(s), the impoundment shall, at a minimum, utilize a single liner that is at least 60-mil HDPE or other material having equivalent characteristics with regard to permeability, resistance to degradation by ultraviolet light, compatibility with the liquids anticipated to be collected in the impoundment, tensile strength, and tear and puncture resistance.

(7) **Impoundment liner - stormwater.** Any applicant or permittee proposing or required to improve an existing stormwater impoundment pursuant to Subsection B of 20.6.6.27 NMAC shall, at a minimum, utilize a liner that is at least 60-mil HDPE or other material having equivalent characteristics with regard to permeability, resistance to degradation by ultraviolet light, compatibility with the liquids anticipated to be collected in the impoundment, tensile strength, and tear and puncture resistance.

(8) **Separation between impoundments and ground water.** Impoundments shall not be constructed in a location where the vertical distance between the seasonal high ground water level and the finished grade of the floor of the impoundment is less than or equal to four feet as documented through the most recent ground water data obtained from an on-site test boring(s) or monitoring well(s).

(9) **Impoundment spillways.** Impoundments intended to contain only wastewater shall not be designed with a spillway.

[20.6.6.17 NMAC - N, xx/xx/2010]

20.6.6.18 ADDITIONAL ENGINEERING DESIGN REQUIREMENTS FOR DAIRY FACILITIES WITH A LAND APPLICATION AREA: [RESERVED]

20.6.6.19 ADDITIONAL ENGINEERING DESIGN REQUIREMENTS FOR DAIRY FACILITIES DISCHARGING TO AN EVAPORATIVE WASTEWATER DISPOSAL SYSTEM: [RESERVED]

20.6.6.20 OPERATIONAL REQUIREMENTS FOR ALL DAIRY FACILITIES:

A. Notice of Presence of Livestock and Wastewater Discharge: A permittee shall provide written notice to the department of the commencement, cessation, or recommencement of wastewater discharge or the placement, removal, or reintroduction of livestock as follows.

(1) **For new dairy facilities.**

(a) **Placement of livestock.** A permittee shall provide written notice to the department a minimum of 90 days before the placement of any livestock at the dairy facility. A permittee shall provide written verification to the department of the actual date of placement of any livestock within 30 days of placement.

(b) **Commencement of wastewater discharge.** A minimum of 90 days prior to the estimated initial wastewater discharge date a permittee shall provide written notice to the department indicating the date

discharge is proposed to commence. A permittee shall provide written verification to the department of the actual date of discharge commencement within 30 days of commencement.

(2) **For existing dairy facilities.**

(a) **Removal or reintroduction of livestock.** A permittee shall provide written notice to the department indicating the date of removal of all livestock from the dairy facility or the date of reintroduction of any livestock at the dairy facility, if all livestock were previously removed, within 30 days of livestock removal or reintroduction.

(b) **Cessation of wastewater discharge.** A permittee shall provide written notice to the department indicating the date wastewater discharge ceased at the dairy facility within 30 days of the cessation of discharge.

(c) **Recommencement of wastewater discharge.** Written notification shall be submitted to the department a minimum of 90 days prior to the date wastewater discharge is expected to recommence. A permittee shall provide written notice to the department of the actual date of discharge recommencement within 30 days of recommencement.

B. Authorized Use of New and Existing Impoundments: Impoundments shall meet the liner, design, and construction requirements of Subsection D of 20.6.6.17 NMAC; except an impoundment in existence on the effective date of the dairy rule that does not meet the requirements of Paragraphs (4) through (9) of Subsection D of 20.6.6.17 NMAC may continue to receive wastewater or stormwater provided the water contaminant concentration in a ground water sample and in any subsequent ground water sample collected from a monitoring well(s) intended to monitor the impoundment does not exceed:

(1) any ground water standard of 20.6.2.3103 NMAC; or

(2) the water contaminant concentration in a ground water sample collected from the upgradient monitoring well, if the water contaminant concentration associated with the upgradient monitoring well exceeds the ground water standard(s) of 20.6.2.3103 NMAC.

C. Constructed Capacity of Existing Impoundment - Determination: If record drawings are unavailable or have not been completed for an impoundment constructed before the effective date of the dairy rule to indicate the impoundment capacity of each existing wastewater, stormwater, or combination wastewater/stormwater impoundment, the permittee shall complete an up-to-date survey and capacity calculation for each impoundment. The permittee shall submit the survey data and capacity calculations to the department with the application for a renewed or modified discharge permit.

D. Free-Liquid Capacity of Existing Impoundment - Determination: An applicant or permittee shall measure the thickness of settled solids in each existing wastewater and combination wastewater/stormwater impoundment during the twelve-month period prior to the submission of an application for a renewed or modified discharge permit and in accordance with the following procedure.

(1) The total surface area of the impoundment shall be divided into nine equal sub-areas.

(2) A settled solids measurement device shall be utilized to obtain one settled solids thickness measurement (to the nearest half-foot) per sub-area. The nine settled solids measurements shall be taken on the same day and the date shall be recorded and submitted to the department with the measurements.

(3) The nine settled solids measurements shall be averaged.

(4) The total volume of settled solids in the impoundment shall be estimated by multiplying the average thickness of the solids layer by the area of the top of the settled solids layer. The area shall be calculated using the impoundment dimensions corresponding to the estimated surface of the settled solids layer.

(5) The estimated volume of settled solids shall be subtracted from the design capacity of the impoundment (less two feet of freeboard) to estimate the actual free-liquid capacity.

(6) The settled solids measurements, calculations, estimation of total settled solids volume and volume of the actual free-liquid capacity for each impoundment shall be submitted to the department with the application for a renewed or modified discharge permit.

E. Impoundment Construction or Improvement: Construction of a new impoundment or improvements to an existing impoundment, including relining of an existing impoundment, shall be performed in accordance with the construction plans and specifications and supporting design calculations submitted with the application for a new, renewed or modified discharge permit, or those submitted after issuance of a discharge permit to achieve compliance with the dairy rule. An applicant or permittee shall notify the department at least five working days before starting construction or improvement of an impoundment to allow for an inspection by department personnel. An applicant or permittee shall submit to the department a construction certification report bearing the seal and signature of a licensed New Mexico professional engineer verifying that installation and

construction was completed pursuant to Subsection C of 20.6.6.17 NMAC. The construction certification report shall include: record drawings, final specifications, final capacity calculations and the CQA/CQC report.

(1) For new dairy facilities, impoundment construction shall be completed as follows:

(a) wastewater impoundment construction shall be completed and the construction certification report shall be submitted to the department before discharging wastewater at the dairy facility;

(b) combination wastewater/stormwater impoundment construction shall be completed and the construction certification report shall be submitted to the department before placing any livestock at the dairy facility; and

(c) stormwater impoundment construction shall be completed and the construction certification report shall be submitted to the department before placing any livestock at the dairy facility.

(2) For existing dairy facilities, impoundment construction shall be completed:

(a) within one year of the effective date of the discharge permit, if construction of a new impoundment or improvement of an existing impoundment is required to achieve compliance with the dairy rule, or pursuant to the contingency timeframe specified in Subsection B of 20.6.6.27 NMAC when invoked after the effective date of a discharge permit issued pursuant to the dairy rule; and

(b) the construction certification report shall be submitted to the department within 90 days of completion of impoundment construction.

F. Manure Solids Separator Installation: A permittee shall employ manure solids separation. All wastewater discharges to an impoundment shall be made through a manure solid separator.

(1) A permittee installing a new wastewater storage or disposal system shall, before discharging to the new system, construct a manure solids separator(s) in accordance with the construction plans and specifications submitted with the application for a new, renewed or modified discharge permit, or those submitted after issuance of a discharge permit to achieve compliance with the dairy rule. Before discharging to the new system, the permittee shall submit to the department confirmation of solids separator construction, including separator type(s) and location(s).

(2) If an existing dairy facility does not employ manure solids separation, the permittee shall construct a manure solids separator(s) within 150 days of the effective date of the discharge permit. The permittee shall submit confirmation of solids separator construction, including separator type(s) and location(s), to the department within 180 days of the effective date of the discharge permit.

G. Grading and Drainage Report and Plan - Submittal and Implementation: An applicant or permittee shall complete a new, or improve an existing grading and drainage system, in accordance with the grading and drainage report and plan required by Subsection C of 20.6.6.17 NMAC and submitted with the application for a new, renewed, or modified discharge permit. An applicant or permittee shall submit a post-development drainage report, including record drawings, bearing the seal and signature of a licensed New Mexico professional engineer.

(1) For new dairy facilities, the grading and drainage system shall be completed and the post-development drainage report shall be submitted to the department before placing any livestock at the dairy facility.

(2) For existing dairy facilities, the improvements to the grading and drainage system shall be completed within one year of the effective date of the discharge permit. The post-development drainage report shall be submitted to the department within 90 days of completion of improvements.

H. Stormwater Conveyance and Collection: A permittee shall divert stormwater from the corrals and other applicable areas at the dairy facility (i.e., calf pens, alleys, feed storage and mixing, etc.) into the stormwater or combination wastewater/stormwater impoundment(s) in accordance with the grading and drainage plan required by Subsection C of 20.6.6.17 NMAC and as specified by current EPA regulatory requirements for concentrated animal feeding operations pursuant to 40 Code of Federal Regulations, Parts 122 and 412, as amended. Conveyance channels shall be constructed and maintained to minimize ponding and infiltration of stormwater.

I. Stormwater Management - Unlined Impoundment: A permittee shall transfer stormwater collected in an unlined impoundment(s) to the wastewater impoundment(s) or the distribution system for the land application area after a storm event to minimize the potential for movement to ground water, and to restore the free capacity required by Subsection D of 20.6.6.17 NMAC. Operational pumps shall be available at the dairy facility at all times for the transfer of stormwater from stormwater impoundment(s) to the wastewater impoundment(s) or the distribution system for the land application area, as authorized by a discharge permit.

J. Stormwater Management - Lined Impoundment: A permittee shall transfer stormwater collected in a synthetically lined impoundment(s) to the wastewater impoundment(s) or the distribution system for the land application area after a storm event to restore the free capacity required by Subsection D of 20.6.6.17 NMAC. Operational pumps shall be available at the dairy facility at all times for the transfer of stormwater from

stormwater impoundment(s) to the wastewater impoundment(s) or the distribution system for the land application area, as authorized by a discharge permit.

K. Flow Meter Installation: A permittee shall employ a flow metering system that utilizes flow measurement devices (flow meters) to measure the volume of wastewater discharged at the dairy facility. Flow meters shall be installed in accordance with the plans and specifications submitted with the application for a new, renewed or modified discharge permit, or those submitted after issuance of a discharge permit to achieve compliance with the dairy rule, pursuant to this section, Subsection C of 20.6.6.17 NMAC, and Subsections I and J of 20.6.6.21 NMAC. Flow meters shall be physically and permanently labeled with the discharge permit number, meter identification nomenclature as specified in a discharge permit, and the month and year of meter installation. Confirmation of installation shall include a description of the device type, manufacturer, meter identification, location, record drawings, and the results of the initial field calibration completed pursuant to Subsection E of 20.6.6.24 NMAC.

(1) An applicant or permittee for a new dairy facility shall install flow meters and submit confirmation of flow meter installation to the department before discharging at the dairy facility.

(2) An applicant or permittee for an existing dairy facility shall install flow meters within 150 days of the effective date of the discharge permit and submit confirmation of flow meter installation to the department within 180 days of the effective date of the discharge permit.

L. Flow Metering Methods: Flow metering shall be accomplished by the following methods.

(1) For pumped flow discharge or transfer situations, an applicant or permittee shall install a closed-pipe velocity sensing totalizing flow meter(s) on the pressurized discharge or transfer line(s).

(2) For gravity flow discharge or transfer situations, an applicant or permittee shall install an open-channel primary flow measuring device(s) (flume or weir), equipped with head sensing and totalizing mechanisms, on the discharge or transfer line(s).

M. Flow Meter Locations: An applicant or permittee shall identify flow meter locations in the application for a new, renewed or modified discharge permit. All flow meters shall be located pursuant to this section and Subsections I and J of 20.6.6.21 NMAC, and indicated on the scaled map required by Subsection W of this section.

N. Authorized Use of Existing Flow Meters: An applicant or permittee proposing to use an existing flow meter(s) shall submit documentation demonstrating that the existing flow meter(s) is installed consistent with this section, and Subsections I and J of 20.6.6.21 NMAC, as appropriate. The proposal shall be submitted with an application for a new, renewed and modified discharge permit and shall include the following documentation:

(1) the location of each existing flow meter indicated on the scaled map required by Subsection W of this section and the identification of the wastewater discharge, or wastewater or stormwater application it is intended to measure;

(2) a copy of the record drawings or manufacturer plans and technical specifications specific to each existing flow meter; and

(3) a field calibration report for each existing flow meter, completed pursuant to Subsection E of 20.6.6.24 NMAC.

O. Flow Metering - Wastewater to Impoundment: A permittee shall install flow meters to measure the volume of wastewater discharged from all wastewater sources to the wastewater or combination wastewater/stormwater impoundment(s). The flow meter(s) shall be installed on the discharge line(s) from all wastewater sources to the wastewater impoundment(s). Meter installation and confirmation of meter installation shall be performed pursuant to this section.

P. Flow Meter Inspection and Maintenance: A permittee shall visually inspect flow meters on a daily basis for evidence of malfunction. If a visual inspection indicates a flow meter is not functioning to measure flow, the permittee shall repair or replace the meter within 30 days of discovery. The repaired or replaced flow meter shall be installed and calibrated pursuant to the dairy rule.

(1) For repaired meters, the permittee shall submit a report to the department with the next quarterly monitoring report following the repair that includes a description of the malfunction; a statement verifying the repair; and a flow meter field calibration report completed pursuant to Subsection E of 20.6.6.24 NMAC.

(2) For replacement meters, the permittee shall submit a report to the department with the next quarterly monitoring report following the replacement that includes plans and specifications for the device pursuant to Subsection C of 20.6.6.17 NMAC, and a flow meter field calibration report completed pursuant to Subsection E of 20.6.6.24 NMAC.

Q. Impoundment Inspection and Maintenance: A permittee shall maintain impoundments to prevent conditions which could affect the structural integrity of the impoundments and associated liners. Such conditions include, but are not limited to, erosion damage; animal burrows or other animal damage; the presence of vegetation including aquatic plants, weeds, woody shrubs or trees growing within five feet of the top inside edge of a sub-grade impoundment, within five feet of the toe of the outside berm of an above-grade impoundment, or within the impoundment itself; evidence of seepage; evidence of berm subsidence; and the presence of large debris or large quantities of debris in the impoundments. A permittee shall inspect impoundments and surrounding berms on a monthly basis to ensure proper condition and control vegetation growing around the impoundments in a manner that is protective of the liners. Within 24 hours of discovery, a permittee shall report to the department any evidence of damage that threatens the structural integrity of a berm or liner of an impoundment or that may result in an unauthorized discharge. A permittee is not required to report routine berm maintenance to the department.

R. Leak Detection System Inspection and Maintenance: A permittee shall inspect and maintain impoundments utilizing primary and secondary liners and equipped with leak detection systems as follows:

(1) leachate accumulation within the leak detection system shall be returned to the respective impoundment utilizing an automatically activated pump to minimize hydraulic head on the secondary liner; and

(2) the permittee shall inspect the sump(s), dedicated pump(s), automated pump activation system, automated alarm system and totalizing flow meter associated with the leak detection system on a monthly basis for evidence of malfunction. If an inspection indicates malfunction of any of these components, the permittee shall repair the component(s) within 30 days of discovery. The permittee shall notify the department of component malfunctions and repairs made to components within 60 days of discovery.

S. Pipe and Fixture Inspection and Maintenance: A permittee shall maintain pipes and fixtures utilized for the conveyance or distribution of wastewater or stormwater at the dairy facility to prevent the unauthorized release of wastewater or stormwater. The permittee shall visually inspect pipes and fixtures on a daily basis for evidence of leaks or failure. Where pipes and fixtures cannot be visually inspected because they are buried, the permittee shall inspect the area directly surrounding the features for evidence of leaks or failure (e.g., saturated surface soil, surfacing wastewater, etc.). If there is evidence an unauthorized discharge has resulted from damaged or faulty pipe(s) or fixture(s), the permittee shall repair or replace the pipe(s) or fixture(s) within 24 hours of discovery. The permittee shall report the unauthorized discharge to the department pursuant to 20.6.2.1203 NMAC.

T. Leachate Management - Manure Solids Separation System: A permittee shall manage the solids captured by and removed from the manure solids separation system(s) and stored at the dairy facility before removal or land application to minimize generation and infiltration of leachate. Leachate from manure solids shall be collected and contained on an impervious surface before disposal.

U. Leachate Management - Manure and Compost Storage: Unless land application of manure solids and composted materials is authorized by a discharge permit, a permittee shall remove manure solids and composted material from the dairy facility. A permittee shall minimize the generation and infiltration of leachate from stockpiled manure solids and composted material before removal from the dairy facility by diverting stormwater run-on and run-off, and preventing the ponding of water within areas used for manure and compost stockpiling.

V. Leachate Management - Silage Storage: A permittee shall minimize the ponding of leachate from silage storage areas. Leachate shall be collected and contained on an impervious surface before disposal.

W. Scaled Map of Dairy Facility: An applicant or permittee shall submit a scaled map of the dairy facility to the department with an application for a new, renewed or modified discharge permit. The map shall be clear and legible, and drawn to a scale such that all necessary information is plainly shown and identified. The map shall show the scale in feet or metric measure, a graphical scale, a north arrow, and the effective date of the map. Documentation identifying the means used to locate the mapped objects (i.e., global positioning system (GPS), land survey, digital map interpolation, etc.) and the relative accuracy of the data (i.e., ~~+/- XX feet or meters~~ within a specified distance expressed in feet or meters) shall be included with the map. Any object that cannot be directly shown due to its location inside of existing structures, or because it is buried without surface identification, shall be identified on the map in a schematic format and identified as such. The map shall include the following objects:

(1) the overall dairy facility layout (barns, feed storage areas, pens, etc.);
(2) the location of all sumps;
(3) the location of all manure solids separators;
(4) the location of all wastewater, stormwater, and combination impoundments;
(5) the location of all mix tanks;
(6) the location and acreage of each field within the land application area;
(7) the location of all monitoring wells;

(8) the location of all irrigation wells;
(9) the location of all meters measuring wastewater discharges to and from impoundments;
(10) the location of all meters measuring stormwater applied to the land application area;
(11) the location of all fixed pumps for discharge and transfer of wastewater or stormwater;
(12) the location of all wastewater and stormwater distribution pipelines;
(13) the location of each ditch irrigation system, acequia, irrigation canal and drain;
(14) the location of all backflow prevention;
(15) all wastewater sampling locations, with the exception of impoundments for disposal by evaporation; and
(16) location of all septic tanks and leachfields.

X. Scaled Map of Dairy Facility - Updates: Following completion of additions or changes to the dairy facility layout which affects items required by Subsection W of this section, a permittee shall update and resubmit to the department the dairy facility map required by this section within 90 days of any additions or changes to the dairy facility layout which affects items required by Subsection W of this section.

Y. Animal Mortality Management: All animal mortalities intended to be disposed of (buried or composted) on a dairy facility shall be managed in accordance with the following requirements:

(1) only mortalities originating at the dairy facility may be disposed of at the dairy facility;
(2) mortalities shall not be stored or buried within 200 feet (measured as horizontal map distance) from private or public wells, or any watercourse;
(3) mortalities shall not be stored or buried within 100 feet (measured as horizontal map distance) from the 100-year flood zone of any watercourse, as defined by the most recent federal emergency management administration, FEMA, map;
(4) stormwater run-on to disposal areas shall be prevented by use of berms or other physical barriers; and
(5) mortalities disposed of by burial shall be placed in a pit(s) where the vertical distance between the seasonal high ground water level and the floor of the pit(s) is greater than 30 feet as documented through the most recent ground water data obtained from an on-site test boring(s) or monitoring well(s).

Z. Determination of Depth-to-Most-Shallow Ground Water and Lithology - Test Boring: An applicant or permittee for a dairy facility without a monitoring well intersecting most-shallow ground water shall provide to the department the depth-to-most-shallow ground water and a lithologic log determined by one site-specific test boring with the application for a new, renewed or modified discharge permit. The test boring shall be drilled in the area of lowest elevation within the production area. The boring advancement shall cease upon encountering most-shallow ground water. Depth-to-most-shallow ground water shall be measured immediately upon ceasing drilling of the boring and again 24 hours following ceasing drilling. Lithology shall be characterized pursuant to American society of testing and materials (ASTM) test method D 2487 or D 2488.

AA. Domestic Wastewater: Domestic wastewater shall not be commingled with wastewater or stormwater generated at a dairy facility. Domestic wastewater shall be treated or disposed of pursuant to 20.7.3 NMAC or a discharge permit issued solely for the discharge of domestic wastewater, as appropriate.

[20.6.6.20 NMAC - N, xx/xx/2010]

20.6.6.21 ADDITIONAL OPERATIONAL REQUIREMENTS FOR DAIRY FACILITIES WITH A LAND APPLICATION AREA:

A. Impoundment Storage Capacity Management - Wastewater and Wastewater/Stormwater Combination: A permittee shall operate and maintain a wastewater or combination wastewater/stormwater impoundment(s) for the purpose of storing wastewater prior to discharging to the land application area. A permittee shall manage wastewater or combination wastewater/stormwater impoundments to maintain the free-liquid capacity and two feet of freeboard required by Subsection D of 20.6.6.17 NMAC.

B. Prohibition of Irrigation Water Storage in Permitted Impoundments: A permittee shall not introduce irrigation water into any impoundment authorized by a discharge permit for the storage of wastewater or stormwater.

C. Authorized Land Application of Wastewater and Stormwater: A permittee shall apply wastewater and stormwater to fields within the land application area, up to the maximum acreage of irrigated cropland specifically authorized by a discharge permit. Wastewater and stormwater shall be applied evenly over the fields in which application is occurring, and ponding shall be minimized.

D. Irrigation Water Rights - Documentation: An applicant or permittee shall submit documentation of irrigation water rights from the office of the state engineer for all fields within the land application

area to the department with the application for a new, renewed or modified discharge permit. Land application shall not be authorized unless the documentation demonstrates adequate water rights are held for irrigation to produce and harvest the crops necessary for the removal of nitrogen as required in this section.

E. Land Application Area - Fresh Irrigation Water Required: Wastewater shall only be applied to fields within the land application area receiving fresh irrigation water. Fresh irrigation water shall be used as the primary source to meet the water consumptive needs of the crop to support crop production and nutrient removal. Wastewater and stormwater are intended as sources of crop nutrients and shall not be used as a primary source to meet the water consumptive needs of the crop.

F. Wastewater/Irrigation Water Blending: A permittee shall not combine wastewater with irrigation water in an impoundment or in the fresh irrigation water supply lines. Wastewater may be blended in a mix-tank(s), applied alternately in the same irrigation line which has been physically disconnected from supply wells or in a separate line, as authorized by a discharge permit.

G. Land Application Area - Existing Infrastructure: An applicant or permittee shall submit documentation for the existing infrastructure necessary to transfer, distribute and apply wastewater or stormwater to all fields within the land application area that have previously received wastewater or stormwater to the department with the application for a new, renewed or modified discharge permit. The documentation shall consist of a narrative statement and photographic documentation that confirm the existing land application distribution system including the type(s) and location(s) of the systems, and the method(s) of backflow prevention employed.

H. Land Application Area - New Infrastructure: Before the initial application of wastewater or stormwater to any field within the land application area that has not previously received wastewater or stormwater, an applicant or permittee shall install a land application distribution system to distribute wastewater and stormwater to all fields that will be receiving wastewater and stormwater. The land application distribution system shall be utilized to distribute and apply wastewater and stormwater to fields within the land application area to meet the requirements of this section. Before the initial application of wastewater or stormwater to any field within the land application area, an applicant or permittee shall submit documentation confirming installation of the land application distribution system, including the type(s) and location(s) of the system(s), and the method(s) employed for backflow prevention.

I. Flow Metering - Wastewater to Land Application Area: A permittee shall install flow meters to measure the volume of wastewater discharged from the wastewater or combination wastewater/stormwater impoundments to the land application area. The flow meter(s) shall be installed on the discharge line(s) from the wastewater impoundment(s) to the distribution system for the land application area. Meter installation and confirmation of meter installation shall be performed pursuant to Subsections K, L, and N of 20.6.6.20 NMAC.

J. Flow Metering - Stormwater to Land Application Area: For a dairy facility transferring stormwater from a stormwater impoundment directly to a distribution system for the land application area, a permittee shall install flow meters to measure the volume of stormwater applied directly to the land application area. The flow meter(s) shall be installed on the transfer line(s) from the stormwater impoundment(s) to the distribution system for the land application area. Meter installation and confirmation of meter installation shall be performed pursuant to Subsections K, L, and N of 20.6.6.20 NMAC.

K. Nutrient Management Plan: Nutrients and other constituents present in wastewater and stormwater shall be applied to irrigated cropland under cultivation in accordance with the requirements of a nutrient management plan (NMP) submitted to the department with the application for a new, renewed, or modified discharge permit. The amount of nitrogen from all combined nitrogen sources, including but not limited to wastewater, stormwater, manure solids, composted material, irritation water and other additional fertilizer(s), along with residual soil nitrogen and nitrogen credits from leguminous crops, shall be applied to each field within the land application area in accordance with the NMP. The NMP shall be developed through utilization of ~~contain all components identified in~~ the natural resources conservation service (NRCS) national comprehensive nutrient management plan development templates as adopted by the NRCS New Mexico field office and in accordance with the NRCS nutrient management conservation practice standard for New Mexico, code 590. ~~*general manual title 190, part 402, and the natural resources conservation service conservation practice standard 590 for New Mexico.*~~ The NMP shall be developed, signed and dated annually by an individual certified by the American society of agronomy as a certified crop advisor (CCA) or certified professional agronomist (CPAg) and by an individual certified by the New Mexico natural resources conservation service as a ~~nutrient management planner~~ conservation planner-comprehensive nutrient management plan. Plant material and soil sampling protocols in the NMP shall be, at a minimum, equivalent to the requirements of Subsections I, K, and L of 20.6.6.25 NMAC. The NMP shall identify the method of crop removal to be employed. The NMP shall be developed for the term of the discharge

permit, updated annually, and implemented pursuant to the dairy rule. The permittee shall submit annual updates to the NMP to the department in the monitoring report due by May 1 of each year.

L. Crop Removal - Mechanical or Grazing: A permittee shall remove crops from fields within the land application area by mechanical harvest unless an alternative proposal for the use of grazing is submitted with the application for a new, renewed, or modified discharge permit. If grazing is the method proposed for crop removal, the nutrient management plan (NMP) prepared pursuant to Subsection K of this section shall include a proposal for the use of grazing for crop removal by means of an actively managed rotational grazing system which promotes uniform grazing and waste distribution throughout the field(s) (and pastures within the field). Proposals shall quantify the degree of nitrogen removal expected to be achieved by grazing, and shall provide scientific documentation supporting the estimated nitrogen removal and justification for the selection of input parameters used in calculations or computer modeling. The NMP proposing grazing for crop removal shall be implemented in its entirety. Annual updates to the NMP shall include updates to the grazing plan as well as report actual weight gains, actual nitrogen uptake of the crop, and estimated crop and nutrient removal from the previous season. An NMP which proposes grazing for crop removal shall also include, at a minimum, the following elements:

(1) the length of the grazing season;
(2) the size and number of animals to be grazed;
(3) the estimated weight gain of animals to be grazed, or estimated intake for maintenance or milk production;
(4) the calculations to determine stocking rates, ~~and~~ total acreage needed, and residency period;
(5) the plant species used to establish pastures and the pasture renovation practices to be employed;
(6) the yield of plant species grown in each pasture and the forage supplied on a monthly basis; and
(7) the grazing management system employed and a map indicating key features of the system including water tanks, fencing, and pasture layout with numbering system and acreage of each pasture.

M. Crop Removal - Changes to Method(s): If a permittee proposes to change the method(s) of crop removal on any field within the land application area authorized by the discharge permit, the permittee shall apply to modify the discharge permit. The permittee shall submit an application which includes the proposed change(s) pursuant to Subsection K and L of this section. The permittee shall not implement the changes unless the department issues a modified permit approving the changes.

N. Irrigation Ditches - Inspection and Maintenance: Irrigation ditches used to land apply wastewater or stormwater at a dairy facility shall be concrete-lined with sealed expansion joints. The permittee shall visually inspect the ditch system on a monthly basis to ensure proper maintenance. Any damage to a lined ditch shall be repaired immediately. A log shall be kept on-site documenting the inspection findings and repairs made, and the log shall be made available to the department upon request.

O. Backflow Prevention: A permittee shall protect all water wells used within the land application distribution system from contamination by wastewater or stormwater backflow by installing and maintaining backflow prevention. Backflow prevention shall be achieved by a total disconnect (physical air gap) between the fresh irrigation water and wastewater and stormwater delivery systems.

(1) A permittee for a new dairy facility shall install backflow prevention and submit written confirmation of installation to the department before discharging at the dairy facility.

(2) A permittee for an existing dairy facility that lacks backflow protection as required by this subsection shall install backflow prevention within 90 days of the effective date of the discharge permit. The permittee shall submit written confirmation of installation to the department within 180 days of the effective date of the discharge permit.

P. Supply Well Protection: With the exception of monitoring wells, all wells located on a dairy facility shall have a surface pad constructed in accordance with the recommendations of Subsection G of 19.27.4.29 NMAC and a permanent well cap or cover pursuant to Subsection I of 19.27.4.29 NMAC.

[20.6.6.21 NMAC - N, xx/xx/2010]

20.6.6.22 ADDITIONAL OPERATIONAL REQUIREMENTS FOR DAIRY FACILITIES DISCHARGING TO AN EVAPORATIVE WASTEWATER DISPOSAL SYSTEM: Impoundment Evaporative Capacity - Wastewater and Wastewater/Stormwater Combination: A wastewater or combination wastewater/stormwater impoundment shall be operated and maintained for the purpose of disposing of wastewater or both wastewater and stormwater by evaporation. A permittee shall manage wastewater or combination wastewater/stormwater impoundments to maintain the capacity and two feet of freeboard as required by Subsection D of 20.6.6.17 NMAC.

[20.6.6.22 NMAC - N, xx/xx/2010]

20.6.6.23 GROUND WATER MONITORING REQUIREMENTS FOR ALL DAIRY FACILITIES:

A. Monitoring Wells - Required Locations: A permittee shall monitor ground water quality hydrologically downgradient of each source of ground water contamination, including but not limited to wastewater, stormwater, and combination wastewater/stormwater impoundments, and fields within the land application area. Monitoring wells shall be located pursuant to this section to detect an exceedance(s) or a trend towards exceedance(s) of the ground water standards at the earliest possible occurrence, so that source control or abatement may be implemented as soon as possible.

(1) **Ground water monitoring - wastewater impoundments.** A minimum of one monitoring well shall be located hydrologically downgradient and within 75 feet (measured as horizontal map distance) of the top inside edge of each wastewater impoundment, including previously utilized impoundments to which wastewater discharge has ceased.

(a) For a new dairy facility, monitoring wells shall be installed before discharging at the dairy facility.

(b) For an existing dairy facility, monitoring wells shall be installed within 120 days of the effective date of the discharge permit.

(c) A permittee constructing a new impoundment at an existing dairy facility shall install the monitoring well(s) required to monitor ground water hydrologically downgradient of the impoundment s before discharging wastewater to the impoundment or within 120 days of the completion of the impoundment, whichever occurs first.

(2) **Ground water monitoring - combination wastewater/stormwater impoundments.** A minimum of one monitoring well shall be located hydrologically downgradient and within 75 feet (measured as horizontal map distance) of the top inside edge of each combination wastewater/stormwater impoundment, including previously utilized impoundments to which wastewater discharge or stormwater collection has ceased.

(a) For a new dairy facility, monitoring wells shall be installed before the earlier of the following:

(i) placing any livestock at the dairy facility; or

(ii) discharging wastewater to at the dairy facility.

(b) For an existing dairy facility, monitoring wells shall be installed within 120 days of the effective date of the discharge permit.

(c) A permittee constructing a new impoundment at an existing dairy facility shall install the monitoring well(s) required to monitor ground water hydrologically downgradient of the impoundment before discharging wastewater to the impoundment, before collecting stormwater in the impoundment or within 120 days of the completion of the impoundment, whichever occurs first.

(3) **Ground water monitoring - stormwater impoundments.** A minimum of one monitoring well shall be located hydrologically downgradient and within 75 feet (measured as horizontal map distance) of the top inside edge of each stormwater impoundment, including previously utilized impoundments to which stormwater collection has ceased.

(a) For a new dairy facility, monitoring wells shall be installed before placing any livestock at the dairy facility.

(b) For an existing dairy facility, monitoring wells shall be installed within 120 days of the effective date of the discharge permit.

(c) A permittee constructing a new impoundment at an existing dairy facility shall install the monitoring well(s) required to monitor ground water hydrologically downgradient of the impoundment before collecting stormwater in the impoundment(s) or within 120 days of the completion of the impoundment, whichever occurs first.

(4) **Ground water monitoring - land application area.** Monitoring wells intended to monitor ground water hydrologically downgradient of fields within the land application area shall be installed as follows.

(a) **Flood irrigation.** Ground water monitoring shall be performed hydrologically downgradient of each flood irrigated field or grouping of contiguous flood irrigated fields. For every 40 acres or less of a single flood irrigated field or a single grouping of contiguous flood irrigated fields, a minimum of one monitoring well shall be located hydrologically downgradient and within 50 feet (measured as horizontal map distance) of the downgradient boundary of the single field or single grouping of contiguous fields, including previously utilized fields to which application of wastewater or stormwater has ceased. Flood irrigated fields separated by ditch irrigation systems, acequias and drains shall be considered contiguous for the purpose of this subsection.

(i) For a new dairy facility, monitoring wells shall be installed before discharging at the dairy facility.

(ii) For an existing dairy facility, monitoring wells shall be installed within 120 days of the effective date of the discharge permit.

(iii) A permittee activating a new flood irrigated field at an existing dairy facility shall install the monitoring well(s) required to monitor ground water hydrologically downgradient of the field before applying wastewater or stormwater to the field.

(b) **Sprinkler or drip irrigation.** Ground water monitoring shall be performed hydrologically downgradient of each sprinkler or drip irrigated field, or grouping of contiguous sprinkler or drip irrigated fields. For every 125 acres or less of a single sprinkler or drip irrigated field, or a single grouping of 125 contiguous acres of sprinkler or drip irrigated fields, a minimum of one monitoring well shall be located hydrologically downgradient and within 50 feet (measured as horizontal map distance) of the downgradient boundary of the single field or single grouping of contiguous fields, including previously utilized fields to which application of wastewater or stormwater has ceased. Sprinkler or drip irrigated fields separated by ditch irrigation systems, acequias and drains shall be considered contiguous for the purpose of this subsection.

(i) For a new dairy facility, monitoring wells shall be installed before discharging at the dairy facility.

(ii) For an existing dairy facility, monitoring wells shall be installed within 120 days of the effective date of the discharge permit.

(iii) A permittee activating a new sprinkler or drip irrigated field at an existing dairy facility shall install the monitoring well(s) required to monitor ground water hydrologically downgradient of the field before applying wastewater or stormwater to the field.

(c) **Crop harvest by grazing.** Notwithstanding the requirements of Subparagraphs (a) and (b) of this paragraph, a minimum of one monitoring well(s) shall be located hydrologically downgradient and within 50 feet (measured as horizontal map distance) of the downgradient boundary of each field where grazing is proposed in an nutrient management plan (NMP) as an alternative to, or in conjunction with, crop removal by mechanical harvest.

(5) **Ground water monitoring - upgradient.** A minimum of one monitoring well shall be located hydrologically upgradient of all ground water contamination sources at a dairy facility in order to establish ground water quality conditions at a location not likely to be affected by contamination sources at the dairy facility.

(a) For a new dairy facility, monitoring wells shall be installed before discharging at the dairy facility.

(b) For an existing dairy facility, monitoring wells shall be installed within 120 days of the effective date of the discharge permit.

(6) **Use of existing monitoring wells.** A monitoring well in existence before the effective date of the dairy rule shall be approved for ground water monitoring at a dairy facility provided all of the following requirements are met.

(a) The monitoring well is located at the location previously approved by the department.

(b) The monitoring well:

(i) if intended to monitor ground water quality near a contamination source, is located downgradient of the source based on current hydrologic conditions and is located no more than 100 feet hydrologically downgradient (measured as a horizontal map distance) from the contamination source; or

(ii) if intended to monitor ground water quality at a location not likely to be affected by contamination sources, is located hydrologically upgradient of sources at the dairy facility.

(c) The monitoring well is constructed with a screen length consistent with the construction requirements of this section or an alternative screen length previously approved by the department, and the screened interval intersects with the most-shallow ground water, and

(i) the alternative screen length is no greater than 30 feet; or

(ii) the monitoring well has a water column within the screened interval of no more than 25 feet in length based upon the most recent ground water level obtained with a water level measuring device pursuant to 20.6.6.23 NMAC.

(d) The monitoring well construction log, the scaled dairy facility map and the ground water elevation contour map, and a copy of the department's written approval of an alternate screen length or recent ground water level data, as appropriate, is submitted with the application for a renewed or renewed and modified discharge permit verifying that the requirements of Subparagraphs (a), (b), and (c) of this paragraph are met.

(7) **Exceptions to monitoring well requirements.** When appropriate, based on the documented ground water flow direction, one monitoring well may be authorized by a discharge permit to monitor ground water hydrologically downgradient of more than one contamination source under any of the following circumstances.

(a) Contiguous impoundments are oriented along a line that is parallel or approximately parallel to the direction of ground water flow beneath the impoundments.

(b) Adjacent impoundments are oriented along a line that is parallel or approximately parallel to the direction of ground water flow beneath the impoundments and separated by a distance of 50 feet or less as measured from the top inside edge of one impoundment to the nearest top inside edge of the adjacent impoundment.

(c) Adjacent or adjacent groupings of contiguous sprinkler or drip irrigated fields are oriented along a line that is parallel or approximately parallel to the direction of ground water flow beneath the fields and the average depth-to-most-shallow ground water measured in on-site monitoring wells pursuant to Subsection F of this section or measured in a site-specific test boring pursuant to Subsection Z of 20.6.6.20 NMAC is 300 feet or greater. A monitoring well(s) installed hydrologically downgradient of a sprinkler or drip irrigated field or a grouping of sprinkler or drip irrigated fields pursuant to Paragraph (4) of this subsection may be authorized by a discharge permit to monitor ground water hydrologically downgradient of not more than two adjacent sprinkler or drip irrigated fields or adjacent groupings of sprinkler or drip irrigated fields.

(8) **Requirement for third monitoring well.** If fewer than three monitoring wells are needed to satisfy the ground water monitoring requirements of Paragraphs (1) through (7) of this subsection, a third monitoring well shall be installed within 75 feet of the contamination source and in a location alternate to the downgradient monitoring well required by this subsection. The third monitoring well shall be installed in an alternative location that allows for the determination of ground water flow direction pursuant to this section.

B. Monitoring Wells - Location Proposals: An applicant or permittee shall identify monitoring well locations in the application for a new, renewed or modified discharge permit pursuant to Subsection A of this section, and shall include the following information:

(1) the location of each monitoring well relative to the contamination source it is intended to monitor shall be indicated on the scaled map required by Subsection W of 20.6.6.20 NMAC;

(2) a written description of the specific location for each monitoring well including the horizontal map distance (in feet) and compass bearing of each monitoring well from the top inside edge of the impoundment berm or edge of the field it is intended to monitor; and

(3) the ground water flow direction beneath the dairy facility used to determine the monitoring well location(s), including supporting documentation used to determine ground water flow direction.

C. Monitoring Wells - Identification Tags: A permittee shall identify all monitoring wells required by the dairy rule with a well identification tag. For above-grade wells, the tag shall be affixed to the exterior of the steel well shroud using rivets, bolts or a steel band. For wells finished below-grade, the tag shall be placed inside the well vault next to the well riser. The tag shall be:

(1) made of aluminum;

(2) at least two inches by four inches in size;

(3) for monitoring wells installed after the effective date of the dairy rule, the tag shall be engraved with:

(i) the discharge permit number;

(ii) the well identification nomenclature specified in a discharge permit;

(iii) the name and New Mexico well driller license number of the well driller who drilled the well; and

(iv) the month and year of well installation; and

(4) for monitoring wells installed before the effective date of the dairy rule and satisfying the requirements of Paragraph (6) of Subsection A of this section, the tag shall be engraved with:

(i) the discharge permit number;

(ii) the well identification nomenclature specified in a discharge permit; and

(iii) if available, the name and New Mexico well driller license number of the well driller who drilled the well, and the month and year of well installation.

D. Monitoring Wells - Construction and Completion: A permittee shall construct monitoring wells pursuant to 19.27.4 NMAC and the following requirements.

(1) All well drilling activities shall be performed by an individual with a current and valid well driller license issued by the state of New Mexico pursuant to 19.27.4 NMAC.

(2) The well driller shall employ drilling methods that allow for accurate determinations of water table locations. All drill bits, drill rods, and down-hole tools shall be thoroughly cleaned immediately before

drilling. The bore hole diameter shall allow a minimum annular space of two inches between the outer circumference of the well materials (casing or screen) and the bore hole wall to allow for the emplacement of sand and sealant.

(3) After completion, the well shall be allowed to stabilize for a minimum of 12 hours before development is initiated.

(4) The well shall be developed so that formation water flows freely through the screen and is not turbid, and all sediment and drilling disturbances are removed from the well.

(5) Schedule 40 (or heavier) polyvinyl chloride (PVC) pipe, stainless steel pipe, or carbon steel pipe shall be used as casing. The casing shall have an inside diameter not less than two inches. The casing material selected for use shall be compatible with the anticipated chemistry of the ground water and appropriate for the contaminants of interest at the dairy facility. The casing material and thickness selected for use shall have sufficient collapse strength to withstand the pressure exerted by grouts used as annular seals and thermal properties sufficient to withstand the heat generated by the hydration of cement-based grouts.

(6) Casing sections shall be joined using welded, threaded, or mechanically locking joints; the method selected shall provide sufficient joint strength for the specific well installation.

(7) The casing shall extend from the top of the screen to at least one foot above ground surface. The top of the casing shall be fitted with a removable cap, and the exposed casing shall be protected by a locking steel well shroud. The shroud shall be large enough in diameter to allow easy access for removal of the cap. Alternatively, monitoring wells may be completed below grade. In this case, the casing shall extend from the top of the screen to six to twelve inches below the ground surface; the monitoring wells shall be sealed with locking, expandable well plugs; a flush-mount, watertight well vault that is rated to withstand traffic loads shall be emplaced around the wellhead; and the cover shall be secured with at least one bolt. The vault cover shall indicate that the wellhead of a monitoring well is contained within the vault.

(8) A 20-foot section (maximum) of continuous well screen shall be installed across the water table. Screen shall consist of continuous-slot, machine slotted, or other manufactured schedule 40 (or heavier) PVC or stainless steel. Screens created by cutting slots into solid casing with saws or other tools shall not be used. The screen material selected for use shall be compatible with the anticipated chemistry of the ground water and appropriate for the contaminants of interest at the dairy facility. The screen slot size shall be selected to retain 90 percent of the filter pack.

(a) Requests for a 30-foot section of continuous well screen may be authorized by a discharge permit when the most recent two years of ground water level data demonstrates a declining water level trend of at least two feet per year. Data supporting ground water levels shall be specific to monitoring wells located at the dairy facility and obtained with a water level measuring device as required by Subsection F of this section.

(b) Requests for a 30-foot section of continuous well screen shall be submitted to the department in the application for a new, renewed or modified discharge permit.

(9) Screen sections shall be joined using welded, threaded, or mechanically locking joints. The method selected shall provide sufficient joint strength for the specific well installation and shall not introduce constituents that may reasonably be considered contaminants of interest at the dairy facility. A cap shall be attached to the bottom of the well screen. Sumps (i.e., casing attached to the bottom of a well screen) shall not be installed.

(10) The bottom of the screen shall be installed no more than 15 feet below the water table, or no more than 25 feet below the water table when additional screen length is authorized by a discharge permit. The top of the well screen shall be positioned not less than five feet above the water table. The well screen slots shall be appropriately sized for the formation materials.

(11) Casing and well screen shall be centered in the borehole by installing centralizers near the top and bottom of the well screen.

(12) A filter pack shall be installed around the screen by filling the annular space from the bottom of the screen to two feet above the top of the screen with clean silica sand. The filter pack shall be properly sized to exclude the entrance of fine sand, silt, and clay from the formation into the monitoring well. For wells deeper than 30 feet, the sand shall be emplaced by a tremmie pipe. The well shall be surged or bailed to settle the filter pack and additional sand added, if necessary, before the bentonite seal is emplaced.

(13) A bentonite seal shall be constructed immediately above the filter pack by emplacing bentonite chips or pellets (three-eighths inch in size or smaller) in a manner that prevents bridging of the chips/pellets in the annular space. The bentonite seal shall be three feet in thickness and hydrated with clean water. Adequate time shall be allowed for expansion of the bentonite seal before installation of the annular space seal.

(14) The annular space above the bentonite seal shall be sealed with a bentonite-cement grout (five lbs. of powdered bentonite, 94 lbs. of Portland cement, and six and a half to eight and a half gallons of clean water),

neat cement grout (94 lbs. of Portland cement and five to six gallons of clean water), or bentonite grout (20 percent solids, created by mixing 50 lbs. of bentonite grout with 24 gallons of clean water). Emplacement of the annular space seal shall be performed by using a tremmie pipe (flow by gravity or pumping through the pipe). Annular space seals shall extend from the top of the bentonite seal to the ground surface (for wells completed above grade) or to a level three to six inches below the top of casing (for wells completed below grade).

(15) A concrete pad (two-foot minimum radius, four-inch minimum thickness) shall be poured around the shroud or well vault and wellhead. The concrete and surrounding soil shall be sloped to direct rainfall and runoff away from the wellhead.

E. Monitoring Wells - OSE Requirements: Should a well permit for a monitoring well be required by the office of the state engineer, the permittee shall obtain the permit prior to well drilling.

F. Ground Water Sample Collection Procedure: A permittee shall perform all ground water sample collection, preservation, transport and analysis according to the following procedure.

(1) Depth-to-most-shallow ground water shall be measured from the top of well casing at point of survey to the nearest 0.01 feet using an electronic water level indicator consisting of dual conductor wire encased in a cable or tape graduated to 0.01 feet, a probe attached to the end of the conductor wire, and a visual or audible indicator.

(2) Monitoring wells shall be purged before sample collection by one of the following methods:

(a) three well volumes of water shall be purged from the well before sample collection; or

(b) the monitoring well shall be purged until measurements of indicator parameters (pH, specific conductance, and temperature) have stabilized. Indicator parameters shall be measured periodically during purging. A parameter stabilization log shall be kept during each sampling event for each monitoring well and include: date; water quality indicator parameter measurements; time for all measurements; and the purge volume extracted. Indicator parameters are considered stable when three consecutive readings made no more than five minutes apart fall within the following ranges: temperature ~~+/-~~ plus or minus 10 percent; pH ~~+/-~~ plus or minus 0.5 units; specific conductance ~~+/-~~ plus or minus 10 percent.

(3) Following purging and immediately before sample collection the following field parameters shall be measured and recorded: pH, specific conductance, and temperature.

(4) In-line flow-through cells shall be disconnected or by-passed during sample collection, if used during purging.

(5) Samples from the well shall be obtained, prepared, preserved and transported to an analytical laboratory for analysis pursuant to the methods authorized by Subsection B of 20.6.6.24 NMAC.

G. Ground Water Sampling and Reporting - Routine: A permittee shall collect ground water samples quarterly from all monitoring wells required by Subsection A of this section and Subsection C of 20.6.6.27 NMAC. Samples shall be analyzed for nitrate as nitrogen, total Kjeldahl nitrogen, chloride, sulfate and total dissolved solids pursuant to Subsection B of 20.6.6.24 NMAC. A permittee shall submit to the department in the quarterly monitoring reports the depth-to-most-shallow ground water, the field parameter measurements, the parameter stabilization log (if applicable), the analytical results (including the laboratory quality assurance and quality control summary report) and a map showing the location and number of each well in relation to the contamination source it is intended to monitor.

H. Ground Water Sampling - New Monitoring Wells: A permittee shall collect ground water samples from all newly installed monitoring wells. Samples shall be analyzed for nitrate as nitrogen, total Kjeldahl nitrogen, chloride, sulfate and total dissolved solids pursuant to Subsection B of 20.6.6.24 NMAC.

(1) Samples shall be collected from the newly installed monitoring wells at new dairy facilities before discharging at the dairy facility.

(2) Samples shall be collected from the newly installed monitoring wells at existing dairy facilities within 150 days of the effective date of the discharge permit.

(3) For dairy facilities installing a new monitoring well during the term of a discharge permit, during construction of a new impoundment, or as a result of required corrective actions, samples shall be collected from the newly installed monitoring wells within 30 days of well completion.

I. Monitoring Well Survey and Ground Water Flow Determination: A permittee shall survey monitoring wells to a U.S. geological survey (USGS) benchmark. Survey data shall include northing, easting and elevation to the nearest hundredth of a foot or shall be in accordance with the "Minimum Standards for Surveying in New Mexico", 12.8.2 NMAC. A survey elevation shall be established at the top-of-casing, with a permanent marking indicating the point of survey. The survey shall be completed and bear the seal and signature of a licensed New Mexico professional surveyor. Depth-to-most-shallow ground water shall be measured from the point of survey to the nearest hundredth of a foot in all surveyed wells pursuant to Subsection F of this section, and the data

shall be used to develop a map showing the location of all monitoring wells and the direction and gradient of ground water flow at the dairy facility.

(1) For a new dairy facility, monitoring wells shall be surveyed before discharging at the dairy facility.

(2) For an existing dairy facility, monitoring wells not previously surveyed in a manner consistent with the requirements of this subsection and Subsection B of 20.6.6.17 NMAC shall be surveyed within 150 days of the effective date of the discharge permit.

J. Monitoring Well Completion Report: A permittee shall submit to the department a monitoring well completion report pertaining to all monitoring wells. For a new dairy facility, the report shall be submitted before discharging at the dairy facility. For an existing dairy facility, the report shall be submitted within 180 days after the effective date of the discharge permit or within 60 days of completion as specified in a discharge permit. The report shall contain the following information:

(1) construction and lithologic logs for the new monitoring wells including well record information specified by 19.27.4 NMAC;

(2) depth-to-most-shallow ground water measured in each new and existing monitoring well;

(3) survey data and a survey map showing the locations of each new and existing monitoring well and a ground water elevation contour map developed pursuant to Subsection L of this section; and

(4) analytical results of ground water samples collected from the new monitoring wells, including laboratory quality assurance and quality control summary reports, and field parameter measurements.

K. Monitoring Well Survey Report - Existing Monitoring Wells: For a dairy facility required to survey existing monitoring wells pursuant to this section a permittee shall submit the monitoring well survey report to the department within 180 days of the effective date of the discharge permit. The report shall contain the depth-to-most-shallow ground water measured in each monitoring well, a surveyed map showing the locations of the monitoring wells, and the direction and gradient of ground water flow at the dairy facility.

L. Ground Water Elevation Contour Maps: A permittee shall develop ground water elevation contour maps on a quarterly basis using data associated with all monitoring wells used for ground water monitoring at the dairy facility. Top of casing elevation data, obtained from monitoring well surveys completed pursuant to this section and quarterly depth-to-most-shallow ground water measurements in monitoring wells, shall be used to calculate ground water elevations at monitoring well locations. Ground water elevations between monitoring well locations shall be estimated using common interpolation methods. Ground water elevations shall be expressed in feet. A contour interval appropriate to the data shall be used, but in no case shall the interval be greater than two feet. Ground water elevation contour maps shall depict the ground water flow direction, using arrows, based on the orientation of the ground water elevation contours, and the location and identification of each monitoring well, impoundment, and field within the land application area. A permittee shall submit ground water elevation contour maps to the department in the quarterly monitoring reports.

M. Monitoring Well Inspection: The department may perform downhole inspections of all monitoring wells. At least 60 days before the inspection, the department shall provide written notice to the permittee by certified mail stating the inspection date and identifying the monitoring wells to be inspected. At least 48 hours before the department's inspection, the permittee shall remove all existing dedicated pumps to allow adequate settling time of sediment agitated from pump removal. If a permittee decides to install a dedicated pump in a monitoring well, the permittee shall notify the department so that the department may have the opportunity to perform a downhole well inspection before pump installation.

[20.6.6.23 NMAC - N, xx/xx/2010]

20.6.6.24 MONITORING REQUIREMENTS FOR ALL DAIRY FACILITIES:

A. Monitoring Reports - Schedule of Submittal: A permittee shall submit monitoring reports to the department on a quarterly schedule and shall contain monitoring data and information collected pursuant to the dairy rule. Quarterly monitoring reports shall be submitted according to the following schedule:

(1) January 1 through March 31 (first quarter) - report due by May 1;

(2) April 1 through June 30 (second quarter) - report due by August 1;

(3) July 1 through September 30 (third quarter) - report due by November 1; and

(4) October 1 through December 31 (fourth quarter) - report due by February 1.

B. Sampling and Analysis Methods: A permittee shall sample and analyze water pursuant to Subsection B of 20.6.2.3107 NMAC. Analysis of water for total sulfur shall be accomplished pursuant to environmental protection agency method 200.7 or equivalent. Sampling and analysis of soil shall be conducted in accordance with "*methods of soil analysis: part 1. physical and mineralogical methods,*" 1986 edition; "*methods of*

soil analysis: part 2. ~~chemical and microbiological properties~~ microbiological and biochemical properties," 1994 edition; and "*methods of soil analysis: part 3. chemical methods*," 1996 edition, published by the American society of agronomy.

C. Wastewater Volume Measurement and Reporting: A permittee shall measure the daily volume of all wastewater discharged to the wastewater impoundment(s) using flow meters. The permittee shall include daily meter readings including the date, time and units of each measurement, and daily volumes of wastewater discharged to the wastewater impoundments, reported in gallons, in the quarterly monitoring reports submitted to the department.

D. Stormwater Sampling and Reporting: A permittee shall collect stormwater samples on a quarterly basis from each stormwater impoundment. The samples shall be collected as soon as possible after a storm event and before transferring the stormwater to a wastewater impoundment(s) or a land application area. The samples shall be analyzed for nitrate as nitrogen, total Kjeldahl nitrogen, chloride, total sulfur~~sulfate~~ and total dissolved solids pursuant to this section. The permittee shall include analytical results, or a statement that stormwater runoff did not occur, in the quarterly monitoring reports submitted to the department.

E. Flow Meter Field Calibration: All flow meters shall be capable of having their accuracy ascertained under actual working (field) conditions. A field calibration method shall be developed for each flow meter and that method shall be utilized to check the accuracy of each respective meter. Field calibrations shall be performed upon installation and, at a minimum, annually thereafter. Flow meters shall be calibrated to within ~~+/-~~ plus or minus 10 percent of actual flow, as measured under field conditions. Field calibrations shall be performed by an individual knowledgeable in flow measurement and in the installation/operation of the particular device in use. The permittee shall submit the results of annual field calibrations to the department annually in the monitoring reports due by May 1. The flow meter calibration report shall include the following:

(1) the location and meter identification nomenclature identified by the department through a discharge permit;

(2) the method of flow meter field calibration employed;

(3) the measured accuracy of each flow meter prior to adjustment indicating the positive or negative offset as a percentage of actual flow as determined by an in-field calibration check;

(4) the measured accuracy of each flow meter following adjustment, if necessary, indicating the positive or negative offset as a percentage of actual flow of the meter; and

(5) any flow meter repairs made during the previous year or during field calibration.

F. Primary Liner Leakage Measurement, Analysis and Reporting: A permittee shall monitor impoundments utilizing primary and secondary liners and equipped with leak detection systems in the following manner.

(1) The monthly volume of leachate pumped from the leak detection system(s) back into the respective impoundment(s) shall be measured using a totalizing flow meter(s). The permittee shall submit monthly meter readings including units of measurement, and monthly volumes to the department in the quarterly monitoring reports.

(2) Monthly meter volumes of leachate shall be used to determine the average daily leakage rate for the respective impoundment. The average daily leakage rate shall be compared to the pump rate to assure that the automated pump system is capable of removing leachate at a rate sufficient to ensure leachate accumulation in the drainage layer is minimized. The permittee shall submit a report documenting that the pump system is operating effectively to the department in the quarterly monitoring reports.

(3) Upon initial discovery of leachate in the leak detection system(s), a leachate sample shall be collected from the system and analyzed for nitrate as nitrogen, total Kjeldahl nitrogen, chloride, total sulfur~~sulfate~~ and total dissolved solids pursuant to this section. The permittee shall submit the analytical results to the department in the next quarterly monitoring report. Should leachate continue to accumulate in the leak detection system such that it is routinely pumped, the permittee shall collect a leachate sample on a quarterly basis, analyze the sample as described above and submit the results to the department in the quarterly monitoring reports.

[20.6.6.24 NMAC - N, xx/xx/2010]

20.6.6.25 ADDITIONAL MONITORING REQUIREMENTS FOR DAIRY FACILITIES WITH A LAND APPLICATION AREA:

A. Volume of Wastewater and Wastewater/Stormwater Land Applied - Measurement and Reporting: A permittee shall measure all wastewater discharges from a wastewater or combination wastewater/stormwater impoundment to each field within the land application area using flow meters. A permittee shall maintain a log recording the date and location of each discharge, flow meter readings immediately prior to and

after each discharge, and the calculated total volume of each discharge reported in gallons and acre-feet. A permittee shall submit a copy of the log entries including units of measurement to the department in the quarterly monitoring reports.

B. Volume of Stormwater Land Applied - Measurement and Reporting: A permittee shall measure all stormwater applications from a stormwater impoundment to each field within the land application area using flow meters. A permittee shall maintain a log recording the date and location of each application, flow meter readings immediately prior to and after each application, and the calculated total volume of each application reported in gallons and acre-feet. A permittee shall submit a copy of the log entries including units of measurement to the department in the quarterly monitoring reports.

C. Wastewater to be Land Applied - Sampling and Reporting: A permittee shall collect and analyze wastewater samples on a quarterly basis for nitrate as nitrogen, total Kjeldahl nitrogen, chloride, total sulfur~~sulfate~~ and total dissolved solids pursuant to Subsection B of 20.6.6.24 NMAC. Samples shall be collected during active milking from a location between the manure solids separator(s) and wastewater impoundment(s) for each separator associated with an individual parlor. Wastewater samples shall be collected from the sampling location(s) proposed in the application for a new, renewed and modified discharge permit, and specified in the discharge permit. A permittee shall submit the analytical results to the department in the quarterly monitoring reports.

D. Manure Solids - Nitrogen Content: The nitrogen content of the manure solids applied to each field within the land application area shall be estimated at 25 pounds of nitrogen per ton. Should a permittee choose to use actual nitrogen content values of on-site manure solids, the permittee shall collect a composite sample on an annual basis. The composite sample shall consist of a minimum of 30 sub-samples collected on the same day and thoroughly mixed. Manure samples shall be analyzed for total Kjeldahl nitrogen and moisture content. The permittee shall submit the analytical results to the department in the quarterly monitoring reports.

E. Irrigation Water - Sampling, Volume Applied, and Reporting: A permittee shall monitor irrigation wells used to supply fresh water to the fields within the land application area to account for additional potential nitrogen supplied to the land application area in the following manner.

(1) Each irrigation well shall be identified in association with the field(s) to which it supplies fresh water.

(2) An annual sample of irrigation water supplied from each well shall be collected and analyzed for nitrate as nitrogen and total Kjeldahl nitrogen, pursuant to Subsection B of 20.6.6.24 NMAC.

(3) The annual volume of irrigation water applied to each field within the land application area shall be estimated for each well.

(4) The permittee shall submit the analytical results and the estimated annual volume of irrigation water applied from each well to each field within the land application area to the department in the monitoring reports due by May 1.

F. Fertilizer Application Reporting: A permittee shall maintain a log of all additional fertilizer(s) applied to each field of the land application area. The log shall contain the date of fertilizer application, the type and form of fertilizer, fertilizer analysis, the amount of fertilizer applied in pounds per acre to each field, and the amount of nutrients applied in pounds per acre to each field. The permittee shall submit a copy of the log entries to the department in the quarterly monitoring reports.

G. Land Application Data Sheets: A permittee shall complete land application data sheets for each field within the land application area to document the crop grown and amount of total nitrogen applied from wastewater, stormwater, manure solids, composted material, irrigation water and other additional fertilizer(s), and the residual soil nitrogen and nitrogen credits from leguminous crops. The permittee shall submit a land application data sheet or a statement that land application did not occur to the department in the quarterly monitoring reports. The land application data sheet shall include the following elements.

~~(1)~~ The information required by Paragraphs (2) through (8) of this subsection from the previous six quarters.

(2) The total monthly volume, reported in acre-feet, of wastewater and stormwater applied to each field of the land application area. Total monthly volumes shall be obtained from flow meter readings of each application pursuant to Subsections A and B of this section.

(3) The total nitrogen concentration of wastewater and stormwater obtained from the corresponding quarterly analyses collected pursuant to Subsection C of this section and Subsection D of 20.6.6.24 NMAC.

(4) The total monthly volume, reported in tons per acre, of manure solids applied to each field within the land application area.

(5) The total nitrogen content of the manure solids estimated at 25 pounds of nitrogen per ton or determined from analysis of manure solids samples collected pursuant to Subsection D of this section.

(6) The total nitrogen concentration within the irrigation water and the amount of irrigation water applied pursuant to Subsection E of this section.

(7) The amount of nitrogen reported in pounds per acre from additional fertilizer(s) applied pursuant to Subsection F of this section.

(8) The amount of residual soil nitrogen and nitrogen from leguminous crops credited to each field within the land application area pursuant to Subsections K and L of this section.

H. Crop Yield Documentation: A permittee shall submit crop yield documentation and plant and harvest dates of each crop grown to the department in the quarterly monitoring reports. Crop yield documentation shall consist of copies of scale-weight tickets or harvest summaries based on scale-weights.

I. Nitrogen Concentration of Harvested Crop: A permittee shall determine the total nitrogen concentration of each harvested crop. A composite sample consisting of 15 sub-samples of plant material shall be taken from each field during the final harvest of each crop grown per year. Samples shall be analyzed for percent total nitrogen and percent dry matter. A permittee shall submit the analytical reports to the department in the quarterly monitoring reports.

J. Nitrogen Removal Summary of Harvested Crop: A permittee shall develop a nitrogen removal summary to determine total nitrogen removed by each crop grown on each field within the land application area. Nitrogen removal shall be determined utilizing crop yield and total nitrogen concentration information collected pursuant to Subsections H and I of this section. A permittee shall submit the summary to the department in the quarterly monitoring reports.

K. Soil Sampling - Initial Event in a Discharge Permit Term: A permittee shall collect composite soil samples from each field within the land application area for the first soil sampling event during the first year following the effective date of the discharge permit. Composite soil samples shall be collected in the five-month period between September 1 and January 31 for all fields regardless of whether the field is cropped, remains fallow, or has received wastewater or stormwater. One surface composite soil sample (first-foot) and two sub-surface composite soil samples (second-foot and third-foot) shall be collected from each field. Composite soil samples shall be collected and analyzed according to the following procedure.

(1) Each surface and sub-surface soil sample shall consist of a single composite of 15 soil cores collected randomly throughout each field. Should a field consist of different soil textures (i.e., sandy and silty clay), a composite soil sample shall be collected from each soil texture within each field.

(2) Surface soil samples (first-foot) shall be collected from a depth of 0 to 12 inches.

(3) Each second-foot sub-surface soil sample shall be collected from a depth of 12 to 24 inches.

(4) Each third-foot sub-surface soil sample shall be collected from a depth of 24 to 36 inches.

(5) Each surface and sub-surface composite sample shall be analyzed for pH, electrical conductivity, total Kjeldahl nitrogen, nitrate as nitrogen, chloride, organic matter, potassium, phosphorus, sodium, calcium, magnesium, sulfate, soil texture, and sodium adsorption ratio.

(6) pH, electrical conductivity, sodium, calcium, magnesium, and sulfate shall be analyzed using a saturated paste extract in accordance with the analytical methodology required by Subsection B of 20.6.6.24 NMAC. Phosphorus shall be analyzed using the Olsen sodium bicarbonate method in accordance with the analytical methodology required by Subsection B of 20.6.6.24 NMAC. Nitrate as nitrogen shall be analyzed by a 2 molar KCl extract in accordance with the analytical methodology required by Subsection B of 20.6.6.24 NMAC. Total Kjeldahl nitrogen, chloride, organic matter, potassium, soil texture, and sodium adsorption ratio shall be analyzed in accordance with the analytical methodology required by Subsection B of 20.6.6.24 NMAC.

(7) The permittee shall submit the analytical results and a map showing the fields and the sampling locations within each field to the department in the monitoring report due by May 1 following the effective date of the discharge permit.

L. Soil Sampling - Routine: Beginning in the year following the initial soil sampling required by this section, the permittee shall collect annual soil samples from each field within the land application area that has received or is actively receiving wastewater or stormwater. Composite soil samples shall be collected in the five-month period between September 1 and January 31. For those fields that have never before received wastewater, the permittee shall collect soil samples immediately before initial wastewater application and annually thereafter. Once a field has received wastewater it shall be sampled annually regardless of whether the field is cropped, remains fallow, or has recently received wastewater or stormwater. One surface composite soil sample (first-foot) and two sub-surface composite soil samples (second-foot and third-foot) shall be collected from each field. Composite soil samples shall be collected and analyzed according to the following procedure.

(1) Each surface and sub-surface soil sample shall consist of a single composite of 15 soil cores collected randomly throughout each field. Should a field consist of different soil textures (i.e., sandy and silty clay), a composite soil sample shall be collected from each soil texture within each field.

(2) Surface soil samples (first-foot) shall be collected from a depth of 0 to 12 inches.

(3) Each second-foot sub-surface soil sample shall be collected from a depth of 12 to 24 inches.

(4) Each third-foot sub-surface soil sample shall be collected from a depth of 24 to 36 inches.

(5) Surface soil samples shall be analyzed for pH, electrical conductivity, nitrate as nitrogen, chloride, organic matter, potassium, phosphorus, sodium, calcium, magnesium, and sodium adsorption ratio.

(6) Sub-surface soil samples shall be analyzed for electrical conductivity, nitrate as nitrogen, and chloride.

(7) pH, electrical conductivity, sodium, calcium, and magnesium shall be analyzed using a saturated paste extract in accordance with the analytical methodology required by Subsection B of 20.6.6.24 NMAC. Phosphorus shall be analyzed using the Olsen sodium bicarbonate method in accordance with the analytical methodology required by Subsection B of 20.6.6.24 NMAC. Nitrate as nitrogen shall be analyzed by a 2 molar KCl extract in accordance with the analytical methodology required by Subsection B of 20.6.6.24 NMAC. Chloride, organic matter, potassium, and sodium adsorption ratio shall be analyzed in accordance with the analytical methodology required by Subsection B of 20.6.6.24 NMAC.

(8) The permittee shall submit the analytical results and a map showing the fields and the sampling locations within each field to the department in the monitoring report due by May 1.

[20.6.6.25 NMAC - N, xx/xx/2010]

20.6.6.26 ADDITIONAL MONITORING REQUIREMENTS FOR DAIRY FACILITIES DISCHARGING TO AN EVAPORATIVE WASTEWATER DISPOSAL SYSTEM: Wastewater to be Evaporated - Sampling and Reporting: A permittee shall collect a composite wastewater sample on a quarterly basis from each wastewater or combination wastewater/stormwater impoundment used for disposal by evaporation. The composite sample from each impoundment shall consist of a minimum of six sub-samples collected around the entire perimeter of each impoundment and thoroughly mixed. Samples shall be analyzed for nitrate as nitrogen, total Kjeldahl nitrogen, chloride, total sulfursulfate and total dissolved solids pursuant to Subsection B of 20.6.6.24 NMAC. A permittee shall submit the analytical results to the department in the quarterly monitoring reports.

[20.6.6.26 NMAC - N, xx/xx/2010]

20.6.6.27 CONTINGENCY REQUIREMENTS FOR ALL DAIRY FACILITIES:

A. Exceedance of Ground Water Standards - Any Monitoring Well: If a ground water sample and any subsequent sample collected from the same monitoring well intended to monitor a contamination source indicate a water contaminant concentration that both exceeds one or more of the ground water standards of 20.6.2.3103 NMAC and exceeds the concentration of such contaminant(s) in a ground water sample collected from the upgradient monitoring well, the permittee shall take the following actions.

(1) **For a monitoring well associated with an impoundment.** Within 90 days of the subsequent sample analysis date, the permittee shall submit and initiate implementation of a corrective action plan pursuant to Subsection B of this section.

(2) **For a monitoring well not associated with an impoundment.** Within 90 days of the subsequent sample analysis date, the permittee may investigate potential sources of contamination that may have caused a standard(s) to be exceeded and shall submit a corrective action plan to the department. The corrective action plan shall describe the results of the investigation of potential sources of the exceedance, describe any repairs made to address the cause of the exceedance, and propose source control measures and a schedule for implementation through completion of source control measures. Within 30 days of department approval, the permittee shall initiate implementation of the corrective action plan.

(3) If ground water monitoring shows that one or more standards of 20.6.2.3103 NMAC continue to be exceeded at least 180 days after the subsequent sample analysis date, the permittee shall submit an abatement plan proposal pursuant to 20.6.2.4106 NMAC. Abatement shall be performed pursuant to 20.6.2.4101, 20.6.2.4103, 20.6.2.4104, and 20.6.2.4106 through 20.6.2.4115 NMAC.

B. Exceedance of Ground Water Standards - Impoundment Monitoring Well: If the constituent concentration in a ground water sample and in any subsequent ground water sample collected from a monitoring well intended to monitor an impoundment(s) exceeds one or more of the ground water standards of 20.6.2.3103 NMAC and exceeds the concentration of such constituent(s) in a ground water sample collected from the upgradient

monitoring well, then within 90 days of the subsequent sample analysis date the permittee shall submit a corrective action plan proposing one or more of the following measures.

(1) For impoundments with a primary liner composed of material other than that required by Subsection D of 20.6.6.17 NMAC, the corrective action plan shall include the following.

(a) A proposal for reconstruction and lining of an existing impoundment, or construction and lining of a new impoundment. Reconstruction or new construction shall be completed pursuant to 20.6.6.17 NMAC within one year of the subsequent sample analysis date. In the event a new impoundment is constructed, the existing impoundment shall be permanently closed pursuant to 20.6.6.30 NMAC.

(b) Construction plans and specifications for the impoundment shall be completed pursuant to 20.6.6.17 NMAC.

(2) For impoundments with a primary liner composed of material consistent with that required by Subsection D of 20.6.6.17 NMAC, the corrective action plan shall include the following.

(a) A proposal for the repair of the existing liner consistent with 20.6.6.17 NMAC, if repair is practicable. Repairs shall be completed within 180 days of the subsequent sample analysis date. If repair is not practicable, the corrective action plan shall propose to replace the liner pursuant to 20.6.6.17 NMAC or to construct a new lined impoundment pursuant to 20.6.6.17 NMAC within one year of the subsequent sample analysis date. If a new impoundment is constructed, the existing impoundment shall be closed pursuant to 20.6.6.30 NMAC.

(b) Construction plans and specifications for the proposal shall be completed pursuant to 20.6.6.17 NMAC.

C. Monitoring Well Replacement: If information available to the department indicates that a monitoring well(s) required by 20.6.6.23 NMAC is not located hydrologically downgradient of the contamination source it is intended monitor, is not completed pursuant to 20.6.6.23 NMAC or contains insufficient water to effectively monitor ground water quality, a permittee shall install a replacement monitoring well(s). The replacement monitoring well(s) shall be installed within 120 days of notification from the department and a survey of the replacement monitoring well(s) shall be performed within 150 days of notification from the department. The replacement monitoring well(s) shall be located, installed, completed, surveyed and sampled pursuant to 20.6.6.23 NMAC. The permittee shall develop a monitoring well completion report pursuant to Subsection J of 20.6.6.23 NMAC and submit it to the department within 180 days of notification from the department.

D. Exceedances of Permitted Discharge Volume: If the daily discharge volume reported pursuant to Subsection C of 20.6.6.24 NMAC exceeds the maximum daily discharge volume authorized by the discharge permit by more than ten percent for any 30 daily measurements within any 90 consecutive days, the permittee shall complete and submit within 60 days of the thirtieth exceedance: a corrective action plan for reducing the discharge volume; or an application for a modified or renewed and modified discharge permit pursuant to 20.6.6.10 NMAC. Within 30 days of department approval, the permittee shall initiate implementation of the corrective action plan.

E. Insufficient Impoundment Capacity: If a survey, capacity calculations, or settled solids thickness measurements, indicate an existing impoundment is not capable of meeting the capacity requirements required by Subsection D of 20.6.6.17 NMAC, then within 90 days of the effective date of the discharge permit the permittee shall submit a corrective action plan for department approval. The plan may include, but is not limited to, proposals for constructing an additional impoundment, reducing the maximum daily discharge volume, removing accumulated solids, changing wastewater or stormwater management practices, or installing an advanced treatment system. The corrective action plan shall include a schedule for implementation through completion of corrective actions. The corrective action plan schedule shall propose completion not to exceed one year from the submittal date of the initial corrective action plan. Within 30 days of department approval, the permittee shall initiate implementation of the corrective action plan. Should the corrective action plan include removal of accumulated solids, solids shall be removed from the impoundment in a manner that is protective of the impoundment liner. The plan shall include the method of removal, and locations and methods for storage and disposal of the solids-slurry. If the plan proposes land application of the solids-slurry, the plan must also include the analytical results of total Kjeldahl nitrogen and chloride obtained from a representative sample of the solids-slurry to be applied.

F. Inability to Preserve Required Freeboard: If a minimum of two feet of freeboard cannot be preserved in the wastewater impoundment, the permittee shall submit a corrective action plan to the department for approval. The corrective action plan shall be submitted within 30 days of the date of the initial exceedance of the freeboard requirement. The plan may include, but is not limited to, proposals for constructing an additional impoundment, reducing the maximum daily discharge volume, changing wastewater management practices, or installing an advanced wastewater treatment system. The corrective action plan shall include actions to be immediately implemented to regain and maintain a minimum of two feet of freeboard until permanent corrective actions have been completed. The corrective action plan shall include a schedule for implementation through

completion of corrective actions. The corrective action plan schedule shall propose completion not to exceed one year from the submittal date of the initial corrective action plan. Within 30 days of department approval, the permittee shall initiate implementation of the corrective action plan.

G. Impoundment - Structural Integrity Compromised: Within 24 hours of discovery, a permittee shall report to the department, any damage to the berms or the liner of an impoundment or any condition that exists that may compromise the structural integrity of the impoundment. Within 15 days of the reported discovery, the permittee shall submit to the department a corrective action plan describing any actions taken or proposed to be taken to repair the damage or condition. Within 30 days of receipt, the department shall respond to the proposed corrective action plan. Repairs to the impoundment liner or berms shall be completed pursuant to 20.6.6.17 NMAC. The corrective action plan shall include a schedule for implementation through completion of corrective actions. The corrective action plan schedule shall propose completion not to exceed one year from the submittal date of the initial corrective action plan. The schedule of corrective actions shall be commensurate to the magnitude and scope of the activities to be completed. Within 30 days of department approval, the permittee shall initiate implementation of the corrective action plan.

H. Impoundments Utilizing Primary and Secondary Liners - Primary Liner Leakage: Within 30 days of the date of discovering that the leakage rate of the leak detection system is increasing or that the functioning automated pump system is unable to keep the interstitial space between the liners free of fluids, the permittee shall submit a corrective action plan for department approval. The corrective action plan shall include a schedule for implementation through completion of corrective actions. The corrective action plan schedule shall propose completion not to exceed one year from the submittal date of the initial corrective action plan. Within 30 days of department approval, the permittee shall initiate implementation of the corrective action plan.

I. Unauthorized Discharge - Reporting and Correction: In the event of a spill or release that is not authorized by the discharge permit, the permittee shall notify the department and take corrective actions pursuant to 20.6.2.1203 NMAC. Wastewater or stormwater shall be contained and pumped to a permitted sump, impoundment, or land application area pursuant to the dairy rule. Wastewater or stormwater applied to the land application area shall conform to the requirements of 20.6.6.21 and 20.6.6.25 NMAC. The permittee shall repair or replace failed components within 48 hours from the time of failure or as soon as possible.

[20.6.6.27 NMAC - N, xx/xx/2010]

20.6.6.28 ADDITIONAL CONTINGENCY REQUIREMENTS FOR DAIRY FACILITIES WITH A LAND APPLICATION AREA: Excessive Nitrogen Accumulation in Soil: If soil sampling conducted pursuant to Subsections K and L of 20.6.6.25 NMAC indicates that excessive nitrogen accumulation has occurred within a field(s) within the land application area, a permittee shall revise the nutrient management plan (NMP) to address the removal of the excessive nitrogen from the soil. Revisions to the NMP shall be made by a certified professional, pursuant to Subsection K of 20.6.6.21 NMAC. The NMP revisions to address excessive nitrogen accumulations within a field(s) shall be incorporated into the subsequent annual update to the NMP and shall be submitted to the department pursuant to Subsection K of 20.6.6.21 NMAC.

[20.6.6.28 NMAC - N, xx/xx/2010]

20.6.6.29 ADDITIONAL CONTINGENCY REQUIREMENTS FOR DAIRY FACILITIES DISCHARGING TO AN EVAPORATIVE WASTEWATER DISPOSAL SYSTEM: Inability to Maintain Required Freeboard: If a combination wastewater/stormwater impoundment used for disposal by evaporation does not have free capacity below the two-foot freeboard level required by Subsection D of 20.6.6.17 NMAC, then within seven days of the date of discovery of insufficient free capacity the permittee shall submit a corrective action plan for department approval. The plan shall include, but is not limited to, a request for temporary permission to discharge to allow immediate removal and disposal of combined wastewater and stormwater; a proposal for long-term corrective actions which may include constructing an additional impoundment; reducing the maximum daily discharge volume; changing wastewater or stormwater management practices; or installing an advanced treatment system. The corrective action plan shall include schedule for implementation to complete corrective actions within one year from the submittal date of the initial corrective action plan. Upon department approval, the permittee shall initiate implementation of the corrective action plan.

[20.6.6.29 NMAC - N, xx/xx/2010]

20.6.6.30 CLOSURE REQUIREMENTS FOR ALL DAIRY FACILITIES:

A. Permanent Closure of Dairy Facility or Impoundments: The following closure actions shall be performed at dairy facilities.

(1) For permanent closure of a dairy facility.

(a) The department shall be notified no later than 30 days after wastewater discharge has permanently ceased at the dairy facility.

(b) Installation of all monitoring wells shall be completed pursuant to 20.6.6.23 NMAC.

(c) All wastewater and combination wastewater/stormwater impoundments shall be emptied of wastewater and stormwater within six months of permanently ceasing wastewater discharge at the dairy facility. All stormwater and combination wastewater /stormwater impoundments shall be emptied of stormwater within six months of removing all livestock from the dairy facility. Wastewater and stormwater removed from impoundments shall be applied to the designated land application area, as authorized by a discharge permit. In the event that land application is not authorized by a discharge permit, a disposal plan shall be submitted for department approval and the plan implemented upon department approval.

(d) Manure solids and compost shall be removed from surface areas at the dairy facility and applied to the designated land application area, as authorized by a discharge permit, or transferred off-site for proper disposal within one year of removing all livestock from the facility.

(e) Complete removal of manure solids from the wastewater impoundment(s) shall be achieved within two years of permanently ceasing wastewater discharge. Complete removal of manure solids from the stormwater and combination wastewater/stormwater impoundment(s) shall be achieved within two years of removing all livestock from the dairy facility. Manure solids shall be applied to the designated land application area, as authorized by a discharge permit. In the event that land application is not authorized by a discharge permit, a disposal plan shall be submitted for department approval and the plan implemented upon department approval.

(f) Impoundment liners shall be perforated or removed and the impoundments shall be re-graded with clean fill to blend with surface topography to prevent ponding within two years of permanently ceasing wastewater discharge and removing all livestock from the facility.

(2) For closure of existing impoundments upon replacement with new impoundments.

(a) Existing impoundments shall be emptied of wastewater and stormwater within six months of completion of the new impoundments. Wastewater and stormwater removed from existing impoundments shall be applied to the designated land application area, as authorized by a discharge permit. In the event that land application is not authorized by a discharge permit, a disposal plan shall be submitted for department approval and the plan implemented upon department approval.

(b) Complete removal of manure solids from existing impoundments shall be achieved within two years of completion of the new impoundments. Manure solids shall be applied to the designated land application area, as authorized by a discharge permit. In the event that land application is not authorized by a discharge permit, a disposal plan shall be submitted for department approval and the plan implemented upon department approval.

(c) Existing impoundment liners shall be perforated or removed and the existing impoundments shall be re-graded with clean fill to blend with surface topography to prevent ponding within two years of completion of the new impoundments.

B. Post-Closure Ground Water Sampling and Reporting: Following completion and confirmation by the department of the requirements of Subsection A of this section, ground water monitoring shall continue pursuant to 20.6.6.23 NMAC until a minimum of eight consecutive ground water sampling events confirm that the standards of 20.6.2.3103 NMAC are not exceeded and the total nitrogen concentration in ground water is less than or equal to 10 milligrams per liter. If monitoring results show that one or more of the standards of 20.6.2.3103 NMAC is exceeded or the total nitrogen concentration in ground water is greater than 10 milligrams per liter, the permittee shall implement contingency requirements pursuant to 20.6.6.27 NMAC. Upon notification from the department that post-closure ground water monitoring may cease, the permittee shall abandon all monitoring wells and submit a report to the department pursuant to Subsection C of this section.

C. Monitoring Well Abandonment: Upon notification from the department, the permittee shall abandon monitoring wells pursuant to 19.27.4 NMAC and the following requirements.

(1) The well casing shall be removed and bentonite-cement grout, neat cement grout, or bentonite grout, prepared as specified in 20.6.6.23 NMAC, shall be placed from the bottom of the borehole to the ground surface using a tremmie pipe.

(2) If the casing cannot be removed, bentonite-cement grout, neat cement grout, or bentonite grout shall be emplaced in the well using a tremmie pipe from the bottom of the well to the ground surface.

(3) A well abandonment report shall be prepared by the permittee and shall provide information equivalent to the plugging record requirements of 19.27.4 NMAC. The well abandonment report shall be submitted to the department within 60 days of completion of well plugging activities.

[20.6.6.30 NMAC - N, xx/xx/2010]

20.6.6.31 ADDITIONAL CLOSURE REQUIREMENTS FOR DAIRY FACILITIES WITH A LAND APPLICATION AREA: [RESERVED]

20.6.6.32 ADDITIONAL CLOSURE REQUIREMENTS FOR DAIRY FACILITIES DISCHARGING TO AN EVAPORATIVE WASTEWATER DISPOSAL SYSTEM: [RESERVED]

20.6.6.33 RECORD RETENTION REQUIREMENTS FOR ALL DAIRY FACILITIES:

A. A permittee shall retain a written record at the dairy facility of all data and information related to field measurements, sampling, and analysis conducted pursuant to this part and the discharge permit. The following information shall be recorded and shall be made available to the department upon request:

(1) the dates, exact place and times of sampling or field measurements;

(2) the name and job title of the individuals who performed each sample collection or field measurement;

(3) the date of the analysis of each sample;

(4) the name and address of the laboratory and the name and job title of the person that performed the analysis of each sample;

(5) the analytical technique or method used to analyze each sample or take each field measurement;

(6) the results of each analysis or field measurement, including raw data;

(7) the results of any split, spiked, duplicate or repeat sample; and

(8) a description of the quality assurance and quality control procedures used.

B. A permittee shall retain a written record at the dairy facility of any spills, seeps, or leaks of effluent, and of leachate or process fluids not authorized by the discharge permit. Records shall be made available to the department upon request.

C. A permittee shall retain a written record at the dairy facility of the operation, maintenance, and repair of all features/equipment used to treat, store or dispose of wastewater, measure flow rates, monitor water quality, or collect other data. Records shall include repair, replacement or calibration of any monitoring equipment and repair or replacement of any equipment used in the waste or wastewater treatment and disposal system. Records shall be made available to the department upon request.

D. A permittee shall retain records of all monitoring information at the dairy facility, including all calibration and maintenance records, copies of all reports, and the application for the discharge permit. Records shall be retained for a period of at least 10 years from the date of the sample collection, measurement, report or application.

[20.6.6.33 NMAC - N, xx/xx/2010]

20.6.6.34 TRANSFER OF DAIRY DISCHARGE PERMITS:

A. Transfer of discharge permits for dairy facilities shall be made pursuant to 20.6.2.3111 NMAC and this section.

B. The transferee(s) shall notify the department, in writing, of the date of transfer of ownership and provide contact information for the new owner(s) pursuant to Subsection B of 20.6.6.11 NMAC and Subsection ~~C~~ B of 20.6.6.12 NMAC. Notification shall be submitted to the department of the transfer within 30 days of the ownership transfer date.

[20.6.6.34 NMAC - N, xx/xx/2010]

20.6.6.35 CONTINUING EFFECT OF PRIOR ACTIONS DURING TRANSITION:

A. A discharge permit issued pursuant to 20.6.2.3109 NMAC that has not expired on or before the effective date of the dairy rule shall remain in effect and enforceable pursuant to the terms and conditions of the discharge permit.

B. An application for a new discharge permit or ~~a~~ an application for a renewed or modified discharge permit submitted to the department before the effective date of the dairy rule, shall be processed by the department if the application has been deemed administratively complete and the requirements of Subsection D of 20.6.2.3108 NMAC have been satisfied. The applicant shall submit a permit fee payment equal to one-half of the applicable permit fee from table 1 of 20.6.2.3114 NMAC within 90 days of the effective date of the dairy rule.

C. If a discharge permit for a dairy facility is expired on the effective date of the dairy rule and an application for renewal has not been received by the department, the permittee, owner of record of the dairy facility or the holder of the expired discharge permit:

(1) shall within 90 days of the effective date of the dairy rule submit to the department an application for a discharge permit renewal, renewal and modification or closure pursuant to 20.6.6.10 NMAC and a filing fee and permit fee payment pursuant to 20.6.6.9 NMAC; or

(2) if the dairy facility has not been constructed or operated, the permittee, the owner of record of the dairy facility or the holder of the expired discharge permit may submit a statement to the department instead of an application for renewal certifying that the facility has not been constructed or operated and that no discharges have occurred; upon the department's verification of the certification, the department shall retire the discharge permit number from use.

D. The department shall process submissions meeting the requirements of Subsections B and C of this section according to the following schedule and subject to the public notice requirements of 20.6.2.3108 NMAC. If the department issues a discharge permit, the permittee shall have ninety days from the effective date of the discharge permit to submit all the necessary information to comply with 20.6.6.10 through 20.6.6.13 NMAC.

(1) For a new discharge permit application or for a renewal application for a discharge permit whose term ended on or before December 31, 2005, the department shall propose approval of a discharge permit or disapproval of an application within 90 days of the effective date of the dairy rule. The department shall notify the applicant of the proposed action by certified mail.

(2) For a renewal application for a discharge permit whose term ended in calendar year 2006, the department shall propose approval of a discharge permit or disapproval of an application within 180 days of the effective date of the dairy rule. The department shall notify the applicant of the proposed action by certified mail.

(3) For a renewal application for a discharge permit whose terms ended in calendar year 2007, the department shall propose approval of a discharge permit or disapproval of an application within 270 days of the effective date of the dairy rule. The department shall notify the applicant of the proposed action by certified mail.

(4) For a renewal application for a discharge permit whose terms ended in calendar year 2008, the department shall propose approval of a discharge permit or disapproval of an application within 360 days of the effective date of the dairy rule. The department shall notify the applicant of the proposed action by certified mail.

(5) For a renewal application for a discharge permits whose term ended in calendar year 2009, the department shall propose approval of a discharge permit or disapproval of an application within 450 days of the effective date of the dairy rule. The department shall notify the applicant of the proposed action by certified mail.

(6) For a renewal application for a discharge permit whose term ended on or after January 1, 2010 but before the effective date of this section, the department shall propose approval of a discharge permit or disapproval of an application within 540 days of the effective date of the dairy rule. The department shall notify the applicant of the proposed action by certified mail.

E. Any dairy facility discharging, capable of recommencing discharging, or that has ceased discharging within the term of its most recent discharge permit shall continue all monitoring and submittal of monitoring reports as prescribed in the most recent discharge permit until the department issues a renewed or renewed and modified discharge permit.

F. Any discharge permit proposed for approval (i.e., draft discharge permit) by the department pursuant to 20.6.2.3109 NMAC, but not made final before the effective date of the dairy rule, is withdrawn. Any permit fee submitted before the withdrawal of such a draft discharge permit shall be applied towards the permit fee for the permit issued pursuant to the dairy rule.

[20.6.6.35 NMAC - N, xx/xx/2010]

HISTORY OF 20.6.6 NMAC: [RESERVED]